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I. EDITORIAL INTRODUCTION.

THE beautiful Frontispiece, with which we introduce this number of our Journal and Review, will greet the reader with a pleasant impression of the honor due to the memory of generous men. It may be received also as a pledge of our intention to embellish our numbers, as often as may be practicable, with similar engravings of distinguished benefactors and educators.

Our first number, issued in August last, was prepared under peculiar circumstances, as was stated in the Prospectus, and could not be offered as a specimen of our proposed publication. It has met, however, with a decidedly favorable reception, and the programme of our work has been everywhere received with expressions of approbation and encouragement.

The present, being designed as a specimen number, several thousands of it will be sent to persons not yet subscribers; and the Editors beg leave to say a few words in elucidation of their general plan, and to ask for their great undertaking, the favor of the friends of education.

It was Lord Bacon's aphorism, that nature is to be subdued and governed only by obeying her laws; and it is a maxim of common sense. On this principle the wheel is turned on its axis, the horse is guided by the bit, and the ships, "though they be so great, and are driven of fierce winds, are turned about, by a very small helm, whithersoever the governor listeth." And obedience to the laws of nature is no less necessary to the success of all agencies and powers in the sphere of morals and of mind. So in launching a new Periodical, which is designed not to *float* merely, on the tide of public opinion, but to *influence* it, the wisdom of adaptation is the

highest wisdom. The public mind, on whose favor such a work is necessarily dependent for support, must first be satisfied, or it can neither be influenced nor improved.

It is thus to satisfy the readers of this number that we here reaffirm, and state more definitely than we have yet done, our object and motive in undertaking the work before us.

First of all it is quite apparent that such a work is needed. There are educational periodicals in several of the States and in Canada; and we would by no means interfere with their circulation, on their several fields, but would gladly promote it. Most of them are ably conducted, and are doing good service.* But they are not national in their character or design; and connected, as most of them are, with State organizations, they are necessarily occupied, more or less, with matters of mere local interest. No one of them has even proposed to make itself a medium of educational intelligence and discussion for the whole country. On the contrary, their conductors have felt the want of a periodical of larger scope and of more extensive correspondence, whose central position would enable it to combine and nationalize the information to be derived from many local centers, and make it available for the benefit of all. They have accordingly themselves been among the first and most earnest in welcoming our proposal to publish a National Journal of Education. Enterprising teachers also—the Faculties of Colleges and Professional Seminaries, the Principals of Academies and Classical Institutes, male and female, and the administrators of public instruction—all, as far as we have heard, have expressed their warm approval of our design. There appears, indeed, to be but one mind, among the enlightened friends of education, as to the need of such a publication as we propose and have already commenced.

The design being approved, the inquiries will arise in many minds: Will it be practicable to produce such a work as is thus extensively known and felt to be needed? Will it be possible to induce the teachers of institutions of various classes, and of different religious denominations, and the advocates of conflicting systems of instruction, all to unite in earnest discussion for the benefit of all? Will they cordially agree in communicating, to a common center, the necessary information? Will the North agree with the

* *Massachusetts Teacher*, Boston; *Connecticut Common School Journal and Annals of Education*, New Britain, Ct.; *Rhode Island Schoolmaster*, Providence, R. I.; *Journal of Education* for Upper Canada, Toronto; *New York Teacher*, Albany, N. Y.; *The Student and Schoolmate*, New York; *Pennsylvania School Journal*, Lancaster, Pa.; *Ohio Journal of Education*, Columbus, O.; *Michigan Journal of Education and Teachers' Magazine*, Detroit, Mich. There may be one or two Journals of Education recently published in other States, but the above list includes all that have been received by us.

South, and the South with the North, the East with the West, and the West with the East, in reciprocating that which, on either side, will bless the giver more than the receiver?

On these points there are, doubtless, difficulties to be encountered and embarrassments to be met. It will involve great labor, and persevering systematic effort, to gather the required information from sources so various and widely separated. But we possess great facilities in this line, and while we can not even hope to accomplish all that might be desired, we shall earnestly endeavor to approximate the point of perfection, in the matter of educational intelligence; and we can not doubt the willingness of many, in all parts of the country, to aid us in this endeavor.

As to differences of religious belief and the peculiarities of the various religious denominations, we have taken counsel of the wisest of our friends, of different church-relations, and feel assured that we have prescribed to ourselves a principle, on which we may reasonably expect the cordial co-operation of all Christian educators. It is, that in maintaining the importance of moral and Christian culture in all systems and stages of education, we will avoid the expression of denominational preferences. On this principle it would seem that liberal-minded men, of every name, may unite in their advocacy of all that is primarily essential in a religious education.

In respect to any antipathies or antagonisms, which may be supposed to exist between different systems of instruction, or classes of institutions, a sincere desire to avail themselves of the wisdom and experience of others, as well as to communicate their own, it is presumed, will induce many, on every side of these debatable questions, to welcome the discussion of them, in a Journal which will be as open to the one as to the other, and will be the servant of all, for the sake of the light and instruction which may thus be rendered available for their common benefit. Patriotism and the love of learning, and every principle of good citizenship, to say nothing of the laws of Christian kindness, will dictate a friendly discussion between those who are the widest asunder in their views. Thus difficulties will be obviated and mountains will become planes.

In relation also to sectional animosities, if any exist, it is gratifying to remark, that the causes of them are all outside of the field of educational effort and discussion. The legislative enactments of each State on these subjects, being entirely independent of those of all the other States, each will of course adapt its system of public instruction to whatever may be peculiar in the condition of its people; and of the public systems, as they exist in the several States and in

large cities, it will be an important part of our work to publish accurate and reliable statements and histories. Respecting these, however, as matters of history and of fact, there will be no ground of dispute. They will be the property of all for the purposes of comparison and improvement. Still there will remain a vast range of topics relating both to systems and institutions, and to the principles of education itself, which will be of common and equal interest to all. These will be legitimate subjects of discussion and debate; and in admitting them freely to our pages, we propose to recognize no privilege of one State over another, but to encourage, by every means, the independent expression and the friendly interchange of the views of experienced Instructors, of all departments, and of every section of the country, for the common benefit of all the States, Provinces, and Territories of the American Continent.

Respublica literarum est totius mundi—the commonwealth of learning is the whole world—and all mankind are interested in the right education of every state and nation. It is to be presumed, therefore, that no true friend of universal education, of whatever section or party, will be reluctant to co-operate with all other friends of the same, in promoting such measures as may be deemed expedient, after due deliberation and discussion, to improve and advance the moral and intellectual culture of so great a people—for they are essentially one people—as are now and will hereafter be embraced in the United States and the adjoining Provinces and Countries.

We have intimated our design to make this work such, that it shall not float on the public mind as a mere thing of amusement, but shall influence it. On this point we would not be misunderstood. It is not that we propose ourselves as leaders in this matter. It is not that we have any favorite schemes of education to advance, which we are not willing to subject to the severest scrutiny. But our object is free discussion, to which we shall invite the contributions of the most able writers and educators of all classes, whose experience in their calling will entitle them to be heard. It is in this way, and less by our own contributions, that we hope to construct a work, whose reasonings, on themes of the highest interest to the human race, will take deep hold upon the thoughts of men; not alone of teachers by profession, but of parents, and citizens, and legislators, and of all true men and women, and which shall thus at once guide the public mind to the adoption of the wisest measures, and urge it to higher resolves and more strenuous endeavors, until ample provision shall be made, in all our States, for the right education of the young, of both sexes, and of all conditions and callings. P.

II. UNCONSCIOUS TUITION.

BY REV. FREDERIC D. HUNTINGTON, D.D.,

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By unconscious tuition, I mean that part of a teacher's work which he does when he seems not to be doing any thing at his work at all. It has appeared to me that some of the most nutritive and emphatic functions of an instructor are really being performed while he seems least to be instructing. To apprehend these fugitive and subtile forces, playing through the business of education with such fine energy, and, if possible, to bring them within the range of a practical dealing and discipline, is the scope of my present design. If the topic should fail of entertainment or profit, it will at least yield me this negative advantage, that it will not tempt me to traverse any pre-existing debate, or prejudice, or clique, or dogma.

The central thought of my doctrine is based on the presumption that the ultimate and total object of the teacher's profession is not the communication of knowledge; nor even, according to the favorite modern formula, the stimulating of the *knowing faculty*, if by the knowing faculty we understand a faculty quite distinguished and separate from the believing faculty, the sensibility, and the will. It has been generally admitted, for a long time, that education does not consist in inserting facts in the pupil's memory, like specimens in a cabinet, or apples dropped into an empty barrel, or freight stowed in the hold of a ship. But not only must we dismiss those mechanical resemblances, which liken the mind to a store-house, a granary, a museum, or a library; we must also carry our conception of learning above the notion of an agile and adroit brain. Education does not consist in provoking bare intellectual dexterity, any more than in presenting ascertained truth to the intellectual perceptions; nor in both together. Education involves appeals to faith, to feeling, to volition. The realm of positive science shades off on every side—not by abrupt transition, but by imperceptible gradations—into the realm of trust; nor does science consult her dignity more than her modesty when she undertakes to sharpen the partition-line of hostility between knowledge and belief. So does the true training of the mind implicate an engagement of the affections, including taste or the sense of beauty, and love or the sense of good, both the mind's freedom and its

harmony being equally dependent on a healthy heart. And so, again, the understanding and the feelings wait on that brave executor, the will; and nobody can be wise who leaves its scholarship neglected.

In a word, in any liberal or Christian acceptance, education is not the training of the mind, but the training of the man. Being the discipline of an organized subject, it is organic in its own nature. No analytical classification can partition off the elements of humanity like the ingredients of a soil. Even of a tree we can not rear a single branch independently of the others, unless we kill the others back by violence. One-sidedness has been the vice of all systems of education hitherto, and every legitimate advance has been an approach to the recognition of the unity and indivisibility of the educated being as a living and infinite soul.

Let us proceed, on the ground of this principle, with our proper theme. My main propositions are these three: 1st. That there is an educating power issuing from the teacher, not by voice nor by immediate design, but silent and involuntary, as indispensable to his true function as any element in it. 2d. That this unconscious tuition is yet no product of caprice, nor of accident, but takes its quality from the undermost substance of the teacher's character. And 3d. That as it is an emanation flowing from the very spirit of his own life, so it is also an influence acting insensibly to form the life of the scholar.

1. I remind the teacher of a fact, which I presume may have been some time disclosed to him, in his dealings with almost any truth in its more secret relations, viz., that all true wisdom involves a certain something that is inexpressible. After all you have said about it, you feel that there is something more which you never can say, and there is a frequent sensation of pain at the inadequacy of language to shape and convey—perhaps also the inadequacy of the conceptions to define—that secret and nameless thought, which is the delicious charm and crown of the subject, as it hangs, in robes of glory, before your mind. Any cultivated person, who has never been oppressed by this experience, must be subject, I should say, to dogmatism, pragmatism, conceit, or some other comfortable chronic infirmity. Where the nature is rich and the emotions are generous, there will always be a reverential perception that ideas only partly condescend to be embodied in words. So it is always found that the truest effects of eloquence are where the expression suggests a region of thought, a dim vista of imagery, an oceanic depth of feeling, beyond what is actually contained in the sentences. You have to judge an orator as much by what he leaves out as by what he puts in. *He* uses words with the true mastery of genius, who not only knows

how to say exactly and lucidly, and with the fewest sounds, the thing he thinks, but how to make what he does say indicate that diviner part of wisdom which must remain forever unsaid. The cleanest rhetorical directness is united with the strongest sense of mystery. You hear thoughts, perfectly within the range of the understanding, sublimely uttered, and you are made aware of the nearness of a world whose thoughts are more sublimely unuttered. Instances at once occur in Shakspeare, in Sir Thomas Browne, in Dante, and, more than in any other living writer, I think, in Thomas De Quincy. So sings old Marlowe:

> "If all the pens that ever poets held
> Had fed the feeling of their masters' thoughts,
> And every sweetness that inspired their hearts,
> And minds, and muses on admired themes;
> If all the heavenly quintessence they 'still
> From their immortal flowers of poesy,
> Wherein, as in a mirror, we perceive
> The highest reaches of a human wit;
> If these had made one poem's period,
> And all combined in beauty's worthiness,
> Yet should there hover in their restless heads,
> One thought, one grace, one wonder, at the best,
> Which into words no virtue can digest."

Nature herself gives us a broad hint to the same purpose. Just when she discloses to our admiration any of her grandest pictures or sculptures, she shuts our lips; "My children, be still," that august schoolmistress sternly says to us, the moment she lifts the vail from before any special majesty or splendor. When we are most moved in any way, she thus prisons our souls in dumb solitude, and makes us feel the utter helplessness of our tongues. If we are presumptuous enough to talk, she secretly rebukes our babbling. The less imposing and lighter aspects of nature permit us to be sociable; but when her diapason-voice sounds, our impertinent ones must cease. A loquacious company may prattle and jest while they float among the winding straits of a picturesque harbor, shut in by the limitations of that narrow scenery; but, if they have souls within them, they will grow thoughtful and silent as they sail out upon the infinite ocean, amid the sublime simplicity of the waves and the sky. They may chatter and laugh together in the variegated and blooming valley; but when they go up among the eternal hills of God, and look off from those solemn pillars of his heaven, an invisible hand will seem to draw them apart from one another, inspiring them with a wonder that no dialect can articulate. They may gossip in gardens of sunshine, but one roll of celestial thunder hushes them.

I am not pretending that in the ordinary processes of juvenile instruction one often arrives at any such impressive expansion of thought, or any such intensity of feeling. I shall not be so understood. Of course a class in spelling, a recitation in arithmetic, the grammatical corrections in an exercise in composition, the daily discipline of three-score boys and girls, will seldom raise those vast and reverential sentiments. My purpose here is simply to show that some of the deepest and most powerful impressions are made on our minds, independently of any spoken or written words, by influences, by signs, by associations beyond any speech. And this point lies close to my argument. You know the remark they used to make about Lord Chatham; that everybody felt there was something finer in the man than any thing he ever said. We are taught, and we teach, by something about us that never goes into language at all. I believe that often this is the very highest kind of teaching, most charged with moral power, most apt to go down among the secret springs of conduct, most effectual for vital issues, for the very reason that it is spiritual in its character, noiseless in its pretensions, and constant in its operation.

Besides, I do undertake to say, only by the way, that in the teacher's profession, as in every other, we are not to judge of the possibilities, or the limitations of the calling, by its common aspects, or its every-day repetition of task-work. I protest against the superficial and insulting opinion, that, in the education of children, there is no room for the loftiest intellectual enterprise, and no contact with divine and inexpressible wonders. Any teacher that so judges his vocation by its details belittles it. The school-room, no less than the philosopher's laboratory, the studio, or the church itself, opens upward into God's boundless heaven. Each of these very sciences I have named has moral relations, and terminates in spiritual mystery. And when you awaken a feeling of that great truth in your pupil by the veneration, the earnestness, and the magnetic devotion of your own mind, you have done him a service no less essential to the completeness of his education, than when you have informed his understanding of certain scientific facts. Arithmetic, for instance, ascends into astronomy, and there you are introduced to laws of quantity, which make the universe their diagram—to the intellectual magnitudes of La Place and Newton—to the unsearchable empire of that religion which feels after the God of Arcturus and the Pleiades. The rules of grammar are only intelligible formularies that lie on the outmost boundary of an inexhaustible study. And the government of your pupils, what is it but the faint and erring endeavor to transfer, into that little kingdom you administer, the justice and the love which are the everlast-

ing attributes of the Almighty himself, applying them even there to immortal souls? Let us not wrong the dignity of such an employment by denying its connection with things unspeakable.

I return, however, to the direct path of my subject. And while I maintain that the scholar ought by all means to learn, from the sympathies of the teacher's spirit, that every study he follows is intertwined with moral obligations, and is related to a divine source, in ways which no text-book does or can lay down, I proceed to more specific statements. It is not in respect to particular branches of instruction, but in respect to what we may call *the moral power of the teacher's own person*, as something, indeed, in which the right action and the best success of *all* kinds of instruction are bound up, that I affirm the necessity of this unspoken and unconscious influence.

If we enter successively a number of school-rooms, we shall probably discover a contrast something like this. In one we shall see a presiding presence, which it will puzzle us at first sight to analyze or to explain. Looking at the master's movements—I use the masculine term only for convenience—the first quality that strikes us is the absence of all effort. Every thing seems to be done with an ease which gives an impression of spontaneous and natural energy; for, after all, it *is* energy. The repose is totally unlike indolence. The ease of manner has no shuffling and no lounging in it. There is all the vitality and vigor of inward determination. The dignity is at the farthest possible remove from indifference or carelessness. It is told of Hercules, god of real force, that "whether he stood, or walked, or sat, or whatever thing he did, he conquered." This teacher accomplishes his ends with singular precision. He speaks less than is common, and with less pretension when he does speak; yet his idea is conveyed and caught, and his will is promptly done. When he arrives, order begins. When he addresses an individual or a class, attention comes, and not as if it was extorted by fear, nor even paid by conscience as a duty, but cordially. Nobody seems to be looking at him particularly, yet he is felt to be there, through the whole place. He does not seem to be attempting any thing, elaborately, with anybody, yet the business is done, and done remarkably well. The three-fold office of school-keeping, even according to the popular standard, is achieved without friction and without failure. Authority is secured, intellectual activity is stimulated, knowledge is got with a hearty zeal.

Over against this style of teacher we find another. He is the incarnation of painful and laborious striving. He is a conscious perturbation; a principled paroxysm; an embodied flutter; a mortal

stir; an honest human hurly-burly. In his present intention he is just as sincere as the other. Indeed, he tries so hard that, by one of the common perversions of human nature, his pupils appear to have made up their minds to see to it that he shall try harder yet, and not succeed after all. So he talks much, and the multiplication of words only hinders the multiplication of integers and fractions, enfeebles his government and beclouds the recitation. His expostulations roll over the boys' consciences like obliquely-shot bullets over the ice; and his gestures illustrate nothing but personal impotency and despair.

How shall we account for this contrast? Obviously there is some cause at work in each case other than the direct purpose, the conscious endeavor, the mental attainments, or the spoken sentiments. Ask the calm teacher—him who is the true *master*—master-workman, master of his place and business—ask him the secret of his strength, and he would be exceedingly perplexed to define it. Tell the feverish one that his restlessness is his weakness, and he will not be able to apply an immediate correction. What are we obliged to conclude, then, but that, in each of these instances, there is going on an unconscious development of a certain internal character or quality of manhood, which has been accumulating through previous habits, and which is now acting as a positive, formative and mighty force in making these boys and girls into the men and women they are to be? And it acts both on their intellectual nature and the moral; for it advances or dissipates their studies, while it more powerfully affects the substance and tendencies of character.

Now there are different organs in our human structure, which serve as media for expressing and carrying on this unspoken and unconscious influence, so that it shall represent exactly what we are. That is, to atone for the defects of language, and moreover, to forestall any vicious attempts we might make at deception, the Creator has established certain signs of his own which shall reveal, in spite of our will, the moral secret.

One of these is the temper; or, rather, that system of nervous network, by which temper telegraphs its inward changes to the outward world. The temper itself, in fact, is one of the ingredients in our composition most independent of immediate and voluntary control. Control over it is gained by the will only through long and patient discipline; and so it is an effectual revealer of our real stuff. It acts so suddenly, that deliberation has not time to dictate its behavior; and, like other tell-tales, it is so much in a hurry, that an after-thought fails to overtake the first message. It lets the hidden man out and pulls off his mask. This temper is doing its brisk

publishing business in every school-house. No day suspends its infallible bulletins, issued through all manner of impulsive movements and decisions. Every pupil reads them, for there is no cheating those penetrating eyes. He may not stop to scrutinize, or even state to himself his impression; but he takes it; it enters into him; it becomes a part of himself. By the balm or the irritation, by the sweetness or the sourness, by his tacit admiration or his ugly resistance, he is being fashioned under that ceaseless ministry. It is either the dew of genial skies enriching him, or it is the continual dropping of a very rainy day, which Solomon himself compares to a "contentious woman," though he probably had not a cross "school ma'am" in his mind. Nor are these formative phases of temper confined to the two extremes commonly suggested, of anger and amiability. They run through an endless variety of delicate intermediate shadings. They partake of the whole circle of dispositions. They are as many as the degrees of virtue and vice, honor and shame. Every teacher moves through his school and conducts his exercises, a perpetual and visible representation to all under him of some sort of temper. When he least thinks it, the influence keeps going out. The sharpest self-inspection will scarcely inform him, moment by moment, what it is; but his whole value as a guide and companion to the young is determined by it; his whole work is colored by it. Penalties imposed in passion are proverbially the seeds of fresh rebellions, and the relative impressions of milder moods are no less certain. Whatever temper you have suffered to grow up in the gradual habit of years, that will get a daily revelation over your desk as visible as any map on the walls.

Another instrument of this unconscious tuition is the human face. There is something very affecting in the simple and solemn earnestness with which children look into their elders' faces. They know by an instinct, that they shall find there an unmistakable signal of what they have to expect. It is as if the Maker had set up that open dial of muscle and fiber, color and form, eye and mouth, to mock all schemes of concealment, and decree a certain amount of mutual acquaintance between all persons, as the basis of confidence or suspicion. All the vital spirits of brain and blood are ever sending their swift demonstrations to that public indicator. It is the unguarded *rendezvous* of all the imponderable couriers of the heart. It is the public playground of all the fairies or imps of passion. If you come before your pupils, after dinner, your countenance gross and stupid with animal excess, do you suppose the school will not instinctively feel the sensual oppression, and know Silenus by his looks? A teacher has only partially comprehended the familiar

powers of his place, who has left out the lessons of his own countenance. *There* is a perpetual picture which his pupils study as unconsciously as he exhibits it. His plans will miscarry, if he expects a genial and nourishing session, when he enters with a face blacker than the blackboard. And very often he may fail entirely to account for a season of rapid and sympathetic progress, which was really due to the bright interpretations and conciliatory overtures glancing unconsciously from his eyes, or subtly interwoven in the lines of frankness and good-will about his lips. The eye itself alone, in its regal power and port, is the born prince of a school-room. He answers a score of questions, or anticipates them, by a glance. "The human countenance," it has been said, "is the painted stage and natural robing-room of the soul. It is no single dress, but wardrobes of costumes innumerable. Our seven ages have their liveries there, of every dye and cut, from the cradle to the bier; ruddy cheeks, merry dimples, and plump stuffing for youth; line and furrow for many-thoughted age; carnation for the bridal morning, and heavenlier paleness for the new-found mother. All the legions of desires and hopes have uniforms and badges there at hand. It is the loom where the inner man weaves, on the instant, the garment of his mood, to dissolve again into current life when the hour is past. There it is that love puts on its celestial rosy red; there lovely shame blushes and mean shame looks earthy; there hatred contracts its wicked white; there jealousy picks from its own drawer its bodice of settled green; there anger clothes itself in black, and despair in the grayness of the dead; there hypocrisy plunders the rest, and takes all their dresses by turns; sorrow and penitence, too, have sackcloth there; and genius and inspiration, in immortal hours, encinctured there with the unsought halo, stand forth in the supremacy of light."

What then? Can a man look otherwise than nature made him to look? Can he reconstruct his features? Can he resolve his face into beauty by a purpose? I reply, nature made his countenance to reflect the spirit of his life. It is a common maxim that some faces, plainest by the rules of classic symmetry, are noble with moral dignity and radiant with spiritual light. The faces we love to look at, over and over again, must be the really beautiful faces, and these are the faces of lovely persons, no matter about your Juno or Apollo. Said Chrysostom, speaking of Bishop Flavian, who had gone to intercede with the Emperor for the rebellious citizens of Antioch, "The *countenance* of holy men is full of spiritual power." This kind of beauty, the only real kind, *is* producible. The soul, such as it is, will shine through. But the completeness of that transformed

expression will be seen only where the long patience of self-control, and the holiest sincerity of love, and the slow triumph of unselfish principle, have wrought their interior work, molding the inner man into a nobleness that the outward shape may honestly image.

Another of these unconscious educatory forces is the voice; the most evanescent and fugitive of things, yet the most reliable as a revealer of moral secrets. The voice, I mean now, not as an articulate medium of thought—that would be its *conscious* function, and that we here expressly set aside—but the voice as a simple sound, irrespective of syllables, and by its quality and volume, by tone, modulation, wave, and cadence, disclosing a disposition in the heart. It must have occurred to us all, how brave and long-continued and sore struggles of right with wrong in the conscience, the secret conflict of heaven with hell, Ormuzd with Ahriman in the bosom, may have been the needful preparation that gave one note of the voice, apparently falling as the most careless of acts, its sweet, celestial accent. I have no doubt that the unexplained reason why some persons remain strangely repulsive to us in spite of all resolute efforts to overcome the aversion, may be owing to some uncongenial quality betokened only in the tones of the voice. And it is familiar how the magic of a euphony, made musical and gracious by pity and love, wins wonderful convictions. I remember hearing a thoughtful person, of fine moral intuitions, who had been a little tormented by the eccentricities of a man of genius, say that all his annoyances vanished before the marvelously affecting pathos with which this odd visitor spoke the single word *Good-night*. We all remember the story of our philanthropic countrywoman quieting the rage of a maniac by her tones. Elizabeth Fry used to do the same thing at Newgate. What we only need to remember is, that into these unpremeditated sounds goes the moral coloring of a character compacted in the deliberate formation of years. And if we would breathe magnanimity, we must be, we must *have been*, magnanimous.

Still another of the silent but formative agencies in education is that combination of physical signs and motions which we designate in the aggregate as *manners*. Some one has said, "A beautiful form is better than a beautiful face; but a beautiful behavior is better than a beautiful form. It is the finest of the fine arts. It abolishes all considerations of magnitude, and equals the majesty of the world." A treatise that should philosophically exhibit the relative proportion of text-books and mere manners, in their effects on the whole being of a pupil, would probably offer matter for surprise and for use. It was said that an experienced observer could tell, in Parliament, of a morning, which way the ministerial wind blew, by

noticing how Sir Robert Peel threw open the collar of his coat. Manners are a compound of form and spirit—spirit acted into form. The reason that the manner is so often spiritless and unmeaning is, that the person does not contain soul enough to inform and carry off the body. There is a struggle between the liberty of the heart and the resistance of the machine, resulting in awkwardness whenever the latter gets the advantage. The reason a person's manner is formal is, that his sluggish imitation of what he has seen, or else a false and selfish ambition, comes in between his nature and his action, to disturb the harmony and overbear a real grace with a vicious ornament. The young, quite as readily as the old, detect a sensible and kind and high-hearted nature, or its opposite, through this visible system of characters, but they draw their conclusion without knowing any such process, as unconsciously as the manner itself is worn. The effect takes place both on the intellectual faculties and the affections; for very fine manners are able to quicken and sharpen the play of thought, making conversation more brilliant because the conceptions are livelier. D'Aguesseau says of Fenelon, that the charm of his manner, and a certain indescribable expression, made his hearers fancy that instead of mastering the sciences he discoursed upon, he had invented them.

Manners also react upon the mind that produces them, just as they themselves are reacted upon by the dress in which they appear. It used to be a saying among the old-school gentlemen and ladies, that a courtly bow could not be made without a handsome stocking and slipper. Then there is a connection more sacred still between the manners and the affections. They act magically on the springs of feeling. They teach us love and hate, indifference and zeal. They are the ever-present sculpture-gallery. The spinal cord is a telegraphic wire with a hundred ends. But whoever imagines legitimate manners can be taken up and laid aside, put on and off, for the moment, has missed their deepest law. Doubtless there are artificial manners, but only in artificial persons. A French dancing-master, a Monsieur Turveydrop, can manufacture a deportment for you, and you can wear it, but not till your mind has condescended to the Turveydrop level, and then the deportment only faithfully indicates the character again. A noble and attractive every-day bearing comes of goodness, of sincerity, of refinement. And these are bred in years, not moments. The principle that rules your life is the sure posture-master. Sir Philip Sydney was the pattern to all England of a perfect gentleman, but then he was the hero that, on the field of Zutphen, pushed away the cup of cold water from his own fevered and parching lips, and held it out to the

dying soldier at his side! If lofty sentiments habitually make their home in the heart, they will beget, not perhaps a factitious and finical drawing-room etiquette, but the breeding of a genuine and more royal gentility, to which no simple, no *young* heart will refuse its homage. Children are not educated till they catch the charm that makes a gentleman or lady. A coarse and slovenly teacher, a vulgar and boorish presence, munching apples or chestnuts at recitations like a squirrel, pocketing his hands like a mummy, projecting his heels nearer the firmament than his skull, like a circus clown, and dispensing American saliva like a Member of Congress, inflicts a wrong on the school-room for which no scientific attainments are an offset. An educator that despises the resources hid in his personal carriage, deserves, on the principle of Swedenborg's retributions, *similia similibus*, or "like deserves like," to be passed through a pandemonium of Congressional bullying.

I have thus specified some of the palpable channels through which the stream of this unconscious influence flows. After all, however, there is a total impression going out from character, through the entire person, which we can not wholly comprehend under any terms, nor grasp in any analysis. We now and then meet a person who, we can not tell how, by the mere magnetism of his being, kindles our enthusiasm and liberates our faculties. History tells of persons whose presence, by virtue of a secret pureness of essence, was aromatic to the senses. I have been told by a Chippewa Indian, that the men of his own tribe and those of the Sioux, between whom there has been a deadly feud for generations, although their forms and features and dress are not at all distinguishable, yet recognize one another for enemies at the greatest distance, selecting foe from friend with the infallible precision of a savage instinct. "Each faculty," it is written, "and each fixed opinion, spaces the body to suit its own play; whence sects and parties wear their bodies for liveries, and are dry or juicy, liberal or stinted, sensual or spirited, according to the openness that their tenets put into their lungs, and their lungs into their livers and frames."

A very competent critic, Mrs. Jameson, speaks thus of the "Life and Letters of Dr. Arnold," the great educational chief of modern times: "I never read a book of the kind with a more harmonious sense of pleasure and *approbation*. Page after page, the mind which was unfolded before me seemed to be a brother's mind—the spirit, a kindred spirit. It was the improved, the elevated, the enlarged, the enriched, the every way superior reflection of my own intelligence, but it was certainly *that*. I felt it so from beginning

to end. Exactly the reverse was the feeling with which I laid down the 'Life and Letters of Southey.' I was instructed, amused, interested; I profited and admired, but with the *man* Southey I had no sympathies; my mind stood off from his; the poetic intellect attracted, the material of the character repelled me. I liked the embroidery, but the texture was repugnant." And that impression is as much more practical and efficient in the school-room than elsewhere, by as much as the place is more circumscribed and simple, more subject to unity and system, the insight of the observers more unsophisticated and their age more plastic. It is the impression which is the moral resultant of all that the teacher has grown up to be—the perpetually overflowing *animus* or spirit, of the sum total of his manhood, weak or strong, sound or corrupt, candid or crafty, generous or mean, sterling or counterfeit, heathen or Christian.

Nor need it cast any suspicion on this doctrine that it implies a power acting which we can not shut up into definitions; certainly not as long as we are born out of one indefinable mystery and die into another. It is a property of man, no less than of even material things, that he carries along with him more than can be measured by his literal dimensions. Why, there is not a flower in all God's gardens but suggests more meaning to the heart than Linnæus himself could extract from its calyx by botanic manipulations. The graceful outline of mountains, the splendor of planets, the shimmer that hangs over the curved sea in a summer noon, the awfulness of midnight, are far more to us than any philosophic data can describe. The commonest objects take on attributes and exert a power not at all accounted for by their matter or visible uses. The house where I was born says something to me, and I thank Him who dwells in a house not made with hands, inhabiting eternity, for it—something which can not be interpreted by the wood, and iron, and mortar, and clay that compose the structure, nor yet by the proportions into which architecture has fashioned them. Its language is eloquent with the immaterial voice, "the unwritten poetry," and the fleeting images that cluster about those lyric names, Childhood and Home.

The Bible that your mother gave you borrows its beauty from no book-maker's art; and before you open its leaves to read, it has sent in a mystic message upon your soul. There are household hymns, divine parables, inspired prophecies, half whose value consists, not in what they literally or purposely disclose, but in what they intimate by association. Shall we hesitate to ascribe a richer measure of the same kind of influence to him who is animated by a living

spirit, and to own a virtue going out from him, the unconscious revelation of his acquired and inward character?

There is one kind of education, too, which has never yet perhaps had exact justice done it under any system, which must be carried forward by this indirect and pictorial method. I mean the imagination; that genial, benignant, Divinely-given faculty. By express tuition you can do almost nothing for it, and what you do you will be likely to do wrong. But unconscious forces within you will stimulate it. And how richly it rewards such nurture! I doubt whether there is any department of even material prosperity that does not stand somehow indebted either for impulse, or courage, or adorning, to the imagination, and whether there is any kind of work that reaches its highest perfection without some of its wonders and pictures. Not a mechanic's bench, nor farmer's home, but imagination has touched it, transfigured it, blessed it with her wand.

Stillingfleet, I know, calls the imagination "a shop of shadows," but it has brightened more shops than it has shaded; and Stillingfleet is not the only preacher that has reviled the source of much of his own power. Imagination acts through association, through form and motion, through glances, through what is most human in our humanity. It is the aureola of common life and the morning light of hope. How many burdens it has eased, how many threatening calamities it disarms, how many clouds it tips with gold, how much homely drudgery it clothes in garments of splendor! Hunt's lines are true as beautiful, in their condensed significance, and suit my purpose as exactly as if they were written for it:

> "Fancy 's the wealth of wealth, the toiler's hope,
> The poor man's piecer-out, the art of nature,
> Painting her landscapes twice; the *spirit* of fact
> As matter is the body; the pure gift
> Of Heaven to poet and to child; which he
> Who retains most in manhood, being a man
> In all things fitting else, is most a man,
> Because he wants no human faculty,
> Nor loses one sweet taste of the sweet world."

Then I think of the dull, stupid scholars in every school; the poor brains that text-books torment; the sad, pitiable dunderheads, with capacity enough for action perhaps by-and-by, but dismally puzzled for the present by these mysteries of geography and fractions. What a jubilee to them is the day they find an animated and vital teacher, who teaches by all the looks, and motions, and heart-beats, and spirit of him, as well as by those dreary problems and ghastly pages. There is no grade of intellect that this highest learning of the soul

does not reach, and so it is a kind of impartial gospel, uplifting glad tidings to encourage despair itself.

It helps, negatively, to the same conclusion, that no moral influence that is put forth, as by deliberate contrivance to put it forth, avails much. It seems as if to go about in cool blood to undertake an influence—to get it up and spend it, forfeited the privilege, like getting up sympathy by a conspiracy, or falling in love, with a prospectus. Who ever heard of a man becoming influential by saying: 'Go to, now, I propose to be influential!" Something about this great sympathetic force requires that it should be, in a sense, indirect and unconscious, in order that it be valid. There is a providential necessity that it be got by preliminary accretions of merit, and be distributed because it can not be helped, or rather distribute itself. We all hate, with a wholesome sort of disgust, the canting formalist, who approaches us with the unctuous advertisement that he intends to operate on us with sanctifying manners, like the pattern young man who offered, in the newspaper, to go into a family where his influence would pay his board. Nobody discerns this assumption of character sooner than boys and girls. Matters of mere technical information may be legitimately conveyed by almost any tongue, but to exercise the power of character, a character must have been earned. The title must have been won by a heroic tone, habitually high. And then its influence, molding these pliant young natures around you, will be as sure as it is silent. Nothing can keep it back. Character is a grand creation in itself. But its grandeur never remains an abstraction. In moral life, influence is the complement of being.

II. It is time, then, to pronounce, more distinctly, a fixed connection between a teacher's unconscious tuition and the foregoing discipline of his life. What he is to impart, at least by this delicate and sacred medium, he must be. "No admittance for shams" is stamped on that sanctuary's door. Nothing can come out that has not gone in. The measure of real influence is the measure of genuine personal substance. How much patient toil, in obscurity, so much triumph in an emergency. The moral balance never lets us overdraw. If we expect our drafts to be honored in a crisis, there must have been the deposits of a punctual life. To-day's simplest dealing with a raw or refractory pupil, takes its insensible coloring from the moral climate you have all along been breathing. Celestial opportunities avail us nothing unless we have ourselves been educated up to their level. If an angel come to converse with us on the mountain top, he must find our tent already pitched in that upper air. Each day recites a lesson, for which all preceding days

were a preparation. Our real rank is determined, not by lucky answers, or some brilliant impromptu, but by the uniform diligence. For the exhibition-days of Providence there is no preconcerted colloquy—no hasty retrieving of a wasted term by a stealthy study on the eve of the examination. Bonnivard, Huss, Wyclyffe, Alfred, Cromwell, Washington, Madame Roland, Sir John Franklin, these valiant souls were not inoculated for their apostleship *extempore*. The roots of all their towering greatness, so brave to the top, ran back under the soil of years.

I have seen a sudden thunder-gust smite an elm on one of our river-meadows, tossing its branches, twisting its trunk, prying at its root till it writhed, as if wrestling with an invisible Titan, and tearing off a few light leaves to whirl in airy eddies, but yet struggling in vain to unsettle the firm and elastic lord of the green valley from its place. Did the earth give her graceful and kingly child, as the cloud came up, any special props or braces, any thicker bark, or longer root to breast the shock? All these had to be provided in the persevering nurture of spring suns and winter blasts, sap-giving summer nights and dripping autumn rains, when no eye could mark the gradual growth. The tempest did not create the vigor which it tried and proved, and left erect as ever.

Test these general positions, in their practical bearing, on your employments, as before, by a familiar example. It is in the experience of most teachers, I presume, that on certain days, from first to last, as if through some subtile and untraceable malignity in the air, the school-room seems to have fallen under the control of a secret fiend of disorder. There is nothing apparent to account for this epidemic perversity. All the ordinary rules of the place are in full recognition. The exercises tramp on in the accustomed succession. The parties are arranged as usual. There are the pupils, coming from their several breakfasts, bringing both their identity and their individuality; no apostasy nor special accession of depravity, over night, has revolutionized their natures; no conspiracy out of doors has banded them into a league of rebellion. Yet the demoniacal possession of irritability has somehow crept into the room and taken unconditional lease of the premises. You would think it was there before the first visible arrival. The ordinary laws of unity have been suddenly bewitched. The whole school is one organized obstruction. The scholars are half-unconscious incarnations of disintegration and contra-position—inverted divisors engaged in universal self-multiplication!

How is such a state of things to be met? Not, I think, you will agree, by direct issue; not *point blanc*. You may tighten your dis-

cipline, but that will not bind the volatile essence of confusion. You may ply the usual energies of your administration, but the resistance is abnormal. You may flog, but every blow uncovers the needle-points of fresh stings. You may protest and supplicate, scold and argue, inveigh and insist, the demon is not exorcised, nor even hit, but is only distributed through fifty fretting and fidgeting forms. You will encounter the mischief successfully, when you encounter it indirectly. What is wanted, is not a stricter sovereignty, but a new spirit. The enemy is not to be confronted, but diverted. That audible rustle through the room comes of a moral snarl, and no harder study, no closer physical confinement, no intellectual dexterity will disentangle it. Half your purpose is defeated if the scholars even find out that you are worried. The angel of peace must descend so softly that his coming shall not be known, save as the benediction of his presence spreads order, like a smile of light, through the place. If a sudden skillful change of the ordinary arrangements and exercises of the day takes the scholars, as it were, off their feet; if an unexpected narrative, or fresh lecture on an unfamiliar theme, kept ready for such an emergency, is sprung upon their good-will; if a sudden resolving of the whole body into a volunteer corps of huntsmen, on the search of some etymological research, the genealogy of a custom, or the pedigree of an epithet surprises them into involuntary interest; or, in a younger company, if music is made the Orphean minister of taming savage dispositions again, then your oblique and unconscious tuition has wrought the very charm that was wanted; the room is ventilated of its restless contagion, and the Furies are fled.

Or if, as is more than probable, the disorder was in the teacher himself; if the petulance of the school all took its origin in the disobedience of some morbid mood in the master's own mind or body, and only ran over, by sympathetic transmission, upon the benches, so that he saw it first in its reflection there, of what use to assail the insubordination by a second charge out of the same temper? His only remedy is to fall back on the settled spiritual laws of his being. He must try to escape out of the special disturbance into the general harmony. He must retreat, in this emergency of temptation, into those resources of character, principle, affection, provided by the previous and normal discipline of his soul. This he will achieve by some such process as that just now specified, displacing the ground of a direct and annoying conflict by new scenery, and, rather leaping up out of the battle, with foes so mean, than staying to fight it out on their level.

On the other hand, you sometimes find yourself taken up into

those lofty moods where you feel gifted with an unwonted competency. You are equal to all encounters then. Your spiritual atmosphere is bracing and elastic. Every opportunity offers itself, like an instrument, right end first. The school, the study, the workshop seems to have been waiting for you to arrive. Every yesterday was like the Jewish preparation-day for a Sabbath. All things are possible. The school-room that day, and all the planet, is under your feet. The recitations take the pitch of your own will; your sentences of explanation come out round and clear, like golden drops. Your steps are the march of a conqueror. Impediments are annihilated. Order is spontaneous. These elevated and depressed moods serve as high and low water-marks to show the sweep of the tidal vibration. But neither the one nor the other is produced by a direct volition. They come by indirection. The springs that produce the ebb and flow lie back of all proximate causes, among the more comprehensive laws of character. And when your state is most free and effective, you feel that the best effect, after all, is not so much exerted by intention as by some involuntary spirit of felicity possessing you. Your success is due, not to specific undertakings at the moment, so much as to an unconscious influence, acting through your person as its organ, a motive to itself. The same thing is revealed to us, if we fix our attention on that common word, good-nature. Good-nature is one of a school-teacher's benignant forces. And it is a force at once unconsciously exerted, and slowly acquired or kept; a reservoir, and not a spout, nor an April shower.

Something analogous takes place in the purely intellectual part of our nature. And this is best illustrated by those acts of the mind which are creative or inventive A subject that you labor painfully to unfold at one time, at another time unfolds itself. That happens, I dare say, to you, which is common enough with writers of sermons; after special elaborate efforts to exhaust a topic, or to set distinctly forward its central idea, he may be apprized that he has only preached *about* the thought, but has not preached *it;* while, in some subsequent performance, when he was not trying, he struck the mark exactly in the eye. The thing he spent a whole discourse in trying to say without getting it said, after all, says itself in a dozen natural words. Of course, the internal relations of truth with itself have not changed, but he has changed, and has become a more simple medium, or voice, for truth to speak by.

The question is a practical question: Are these occurrences the anomalies they appear, or are they subject to a secret law? Was the final and unexpected elucidation of the theme in no way in-

debted to the previous exercise? Or, was the clarified mental faculty, when the nebulous conception came out into strong, sharp light, the result of no foregoing discipline, or immediate and determinable cause, affecting the health of the brain? Is it certain that the "dark days" at school are totally inexplicable phenomena, and inevitable? Or can those other days of liberty and joy never be created at will?

It is my belief, that these instances I have cited are simply extreme examples of a force which runs through all our life, the force of a funded but unreckoned influence, accumulated unconsciously, and spending itself through unconscious developments; in other words, that these special moods, whether dense or rare, which appear to come and go without our control and without law, are yet the result of causes pertaining to the regular growth of character. I believe that whenever psychology and physiology shall come to be as exactly understood as the mathematical relations of astronomy, one of these freaks of temperament may come to be as confidently predicted as an eclipse of the sun. It is an outbreak, under prepared conditions, of a moral quality inbred by foregoing habits, however mixed and obscure. In short, there is a spirit of the schoolroom; not to be waited for, like a miraculous Pentecost, but to be earned, and gained, and unfolded, like every great spiritual treasure in our life, under the steady grace of God.

III. My third and final point is, that, as the unconscious tuition emanates from the inmost spirit of the teacher's life, not by accident nor lawless caprice, but in real accordance with the antecedent growth and quality of his character, so it is the most decisive energy molding the interior life of the scholar. The whole divine economy, as respects our constitution, renders it impossible to detach the power of a man's speech from the style of his personal manhood. A handsome but heartless speaker never yet stole the secret of a sincere conviction. He may gain an unlimited admiration, but he is abridged of permanent strength. The climate of abstract and unembodied thought is a polar zone. If there is a moral ingredient in the business of education at all, then, as with all other institutions that affect society, the question is paramount, What is the quality, temper, life of the speaking man? When an aspirant for public office, of a vicious substance or no substance at all, is defeated in his ravenous and lying ambition, however correct his mere political opinions, there is a divine justice in his disappointment. And we are well persuaded, if we are good citizens, that when chicane and falsehood gain a temporary promotion, the Nemesis that can afford to wait is not outwitted. The world's

ardent and lasting enthusiasms center in some great personal object. How it would mock every admiring and reverential sentiment we cherish toward the august and endeared memory of the Father of his Country, if we were told to expunge from our minds all notion of what Washington *was* as a man, erase that lofty figure from the early scenery of the nation's history, sink his personal characteristics, and think only of the written words preserved to us in Mr. Sparks' collection of his correspondence and political documents! Personal relations, friendships, sympathies, clasped hands, answering eyes, touch, symphonious heart-beats, constitute the chief charm and privilege and joy of existence. We can easily conceive of all the bare *materiel* of instruction being conveyed into a school-room through a mechanism of pipes in the wall, or maps let down by pulleys, and its discipline administered by a vailed executioner, no heart-relations being suffered to grow up between teacher and taught. Into what sort of a bleak degradation would a generation be reduced by such a machinery? Yet every teacher approaches to that metallic and unillumined regimen who lets his office degenerate into a routine; who plods through his daily task-work like the tread-wheel wood-sawing horse in the railway-station shed, with no more freshness of spirit than the beast, and no more aspiration than the circular saw he drives; who succumbs to the deadening repetition, and is a virtual slave, yoked under bondage to the outside custom of his work. All sorts of human service are more or less exposed to be paralyzed by this torpor of routine; but no intellectual profession stands in more peril of coming under the blight of it than that of the teacher, partly for the reason that the same lessons recur, and partly because of the distance of attainment separating the preceptor from the pupil. There are some lawyers who plead like parrots; some doctors who give medicine as mechanically as a trip-hammer smites iron; some preachers who preach only from the throat outward, fetching up no deep breaths from the region of the heart; some manufacturers whose mental motions are as humdrum as their own shuttles, and engineers as automatic as the valves and levers of their engines. It is a greater mischief than we think, and strikes a deeper damage into the world's honor. Going through the whole lesson of life in the homeliest prose, from spade to sermon, from kitchen to church, from making loaves to making love, from marketing to marriage, such people dwarf down the whole wondrous majesty and mystery of our being to a contemptible carving-mill, turning out so many blocks or blockheads from so much timber. But the wrong done by it is never more disastrous than when it falls on the buoyant, the impressible, the affectionate, and

aspiring soul of childhood. Let every beginner, on the threshold of his vocation, earnestly pray and strive to be saved from the doom of a routine teacher!

The world is full of proofs of the power of personal attributes. In most situations—in none more than a school—what a man *is* tells for vastly more than what he *says*. Nay, he may say nothing, and there shall be an indescribable inspiration in his simple presence. Every person represents something, stands for something. At least he represents a value antecedently created in his own character. As was said of Bias, the wise Greek: Himself is the treasure that a whole life has gathered. He stands for the wealth of being that a thousand past struggles have contributed to form. It is a Romish legend, that Christ and the Virgin have appeared to certain saints and impressed sensible and indelible works on their persons. Such signs of heavenly favor are certainly stamped on the great and good whom we revere, by their secret conflicts, ended in victories. Unobserved, unuttered, unconscious, is the preparation of that power. Eight solitary and suffering years the great modern apostle of Christian missions toiled at his post before a single convert confessed the faith; did he dream of the mighty influence those obscure and patient years were building up, to react on the faith and inspire the zeal of all believing souls, thus *re-Christianizing Christendom?* So his wise and calm biographer—if I may be pardoned this reference to a living educator whose wisdom you have all seen and felt as well as heard—has often seemed to me a striking illustration of the strength that lives in simple character, apart from, beyond and above, all the literal contents of all speech and all actions. And when we ascend from human personages to the Divine, and behold the Lord of all souls, just before his crucifixion, bending to wash his disciples' feet, we have, in that visible posture of condescension, a symbolizing of the whole humility of his religion—an incarnation of his redeeming office, which, like the cross itself, no language can translate. Seneca advised one of his friends to represent to himself Cato, or Socrates, or some other sage, as a constant observer—as a formative power. Alexander's statue had no such stimulus to inflame Cæsar, as the schoolmistress of a dozen pupils has to raise ennobling resolves in their susceptible blood.

There is a touching plea in the loyal ardor with which the young are ready to look to their guides. In all men, and in women more than in men, and in children most of all, there is this natural instinct and passion for impersonating all ideal excellence in some superior being, and for living in intense devotion to a heroic presence. It

is the privilege of every teacher to occupy that place, to ascend that lawful throne of homage and of love, if he will. If his pupils love him, he stands their ideal of an heroic nature. Their romantic fancy invests him with unreal graces. Long after his lessons are forgotten, he remains, in memory, a teaching power. It is his own forfeit if, by a sluggish, spiritless brain, mean manners, or a small and selfish heart, he alienates that confidence and disappoints that generous hope.

I would say to all teachers—if I may here express my sense of the unity of their office, in its true interpretation, with my own as a minister in the Church—we have been touching here the most sacred issues of our common duty. It is felt, I believe, more and more every day, by all instructors who do not insult and profane their high calling by mere frivolous or mercenary dispositions, that the saddest perplexity they have to meet is the right moral management of their charge. Would to God we might help one another in that profoundest study! On your intellectual harvest, notwithstanding the inequalities of gifts, you can rely with a comparative assurance, in return for your fidelity. But when you approach the child's conscience and spirit, you confess the fearful uncertainties that invest that mysterious and immortal nature. Need it be always so? Have we no promises from God? Is there no covenant for our children to comfort us? Is not temptation itself subject to spiritual laws, which we may hope more and more to comprehend as we descend into deeper and deeper fellowship with Him who hath put all things under his feet?

Of this at least we may be sure. The fixed and everlasting principles of character can not be put aside, nor bribed, nor held in suspense, either to accommodate our moral indolence or to atone for our neglects. What we are daily sowing in self-discipline we shall reap in the failure or success of our work. What is in us will out, spite of all tricks and masks. Genuine souls *tell*, and no hypocrisy can mock or circumvent them. If we mean to train disciples of a Christian virtue, we must march the whole road ourselves. If we would mold the living sculpture, we must first fashion our implements out of purity, simplicity, love, and trust. We are watched, we are studied, we are searched through and through by those we undertake to lead—not in a jealous or malignant criticism, but in earnest good faith. A manhood that is manly, a womanhood that is womanly—these are not such ugly sights that young hearts should turn away from them or disown their fascination. Like produces like. Candor, magnanimity, veracity, tenderness, worship—these are no juvenile graces meant to be set on children's breasts by grown-up teachers on whose own lives their glory never gleams.

Not the most unflagging persistence, not the pains-taking that wears out sinews and nerves, and wearies hope itself; not the sharpest correction or the kindest counsel; not the most eloquent exhortations to the erring and disobedient, though they be in the tongues of men or of angels, can move mightily on your scholars' resolutions, till the nameless, unconscious, but infallible presence of a consecrated heart lifts its holy light into your eyes, hallows your temper, and breathes its pleading benediction into your tones, and authenticates your bearing with its open seal. This, my brothers and sisters, is our necessity. And because it is Heaven's command, it is our sufficient encouragement.

No system of education is complete till it concerns itself for the entire body, and all the parts of human life—a character high, erect, broad-shouldered, symmetrical, swift; not *the mind*, as I said, but *the man*. Our familiar phrase, "whole-souled," expresses the aim of learning as well as any. You want to rear men fit and ready for all spots and crises, prompt and busy in affairs, gentle among little children, self-reliant in danger, genial in company, sharp in a jury-box, tenacious at a town-meeting, unseducible in a crowd, tender at a sick-bed, not likely to jump into the first boat at a shipwreck, affectionate and respectable at home, obliging in a traveling party, shrewd and just in the market, reverent and punctual at the church, not going about, as Robert Hall said, "with an air of perpetual apology for the unpardonable presumption of being in the world," nor yet forever supplicating the world's special consideration, brave in action, patient in suffering, believing and cheerful everywhere, fervent in spirit, serving the Lord. This is the manhood that our age and country are asking of its educators—well-built and vital, manifold and harmonious, full of wisdom, full of energy, full of faith.

The researches of vegetable chemistry tell us that flowers borrow their colors, by hidden affinities, out of the separate soils they grow on, though the earthy bed gives no prophetic pledge, to the eye, of the beauty that will bloom from it. A dull, sober, quakerish clay shoots up "the splendid hues of the hypoxis," and the lupine spreads its soft azure petals over the sharp yellow sand. The fringed gentian,

> "Blue, blue as if the sky let fall
> A flower from its cerulean wall,"

smiles over the blackest mud. There are plants that suck luxuriant verdure from the arid breast of rocks. Others, on margins of the ocean, distill sweetness through roots soaked always in bitter brine; and others seem to breathe in their only nutriment from the air, turning the impalpable ether, by their marvelous alchemy, into snow-

white berries or evergreen boughs. But into that more wonderful human stock, of whose nurture I speak, there enter, by influences as concealed, as mysterious, yet as conformable to the divine regularity of the causes in God's economy, not only the blended contributions of all elements in earth, and sea, and air, but the spiritual forces of a living Guide. And so the educated man is meant to be, not a subject of philosophic climates or geographic sections, but the incarnation of an illimitable humanity, with all the universe in his leaping pulses, with life eternal in the organs of his liberal and believing soul.

Teachers are the directors, under Christ, the masters of this immortal rearing. The Prussians have a wise maxim, that whatever you would have appear in a nation's life you must put into its schools. Entering into the dignity of so grand an enterprise, teachers are the ministers of every higher institution in our social state. They are friends and benefactors of the family. They are builders and strengtheners of the Republic, perpetually reinaugurating the Government. They are apostles for the Church. They are fellow-helpers to the truth of Him who is Father of all families, King over all empires, Head of the Church. If I heartily congratulate them on such possibilities and opportunities of honor, will it be deemed a presumption that I have urged them to be disinterested in that friendship, wise master-builders, faithful apostles?

III. ON THE DEMOCRATIC TENDENCIES OF SCIENCE.

BY DENISON OLMSTED, LL.D.,

Professor of Natural Philosophy and Astronomy in Yale College.

READ BEFORE THE AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF EDUCATION.

[Before commencing the reading of his paper, the Professor remarked that it was a most interesting feature of the present meeting, that it embraced so full a representation of the various departments of education, comprising Presidents of Colleges and Universities, Professors, State Superintendents of Schools, Principals of Normal Schools, Preceptors of High Schools and Academies, and teachers of every description. The sight impressed him most agreeably, as showing the unity of the cause of education, into however many fields its laborers may be distributed, and exhibiting the ties by which all were bound together into one fraternal band. In the brief essay which he had prepared for the present occasion, his intention was to enter a plea for the colleges, yet he had never ceased to feel a deep interest in the cause of common schools. Indeed, some of his friends present knew, that the common schools were his first love; that the idea of normal schools occurred to him in early youth, and was publicly urged by him in an oration which he delivered at Yale College, on taking his Master's degree in 1816—sooner, it was believed, than it had occurred to any other person in the country; and could he have met with adequate support for carrying out his views, he would have enthusiastically devoted his life to the promotion of this grand object. He proceeded to read as follows:]

It has been but too common in our country to raise an outcry against Colleges and Universities, as being aristocratic institutions, designed chiefly for the benefit of the rich. The same charges have sometimes been brought against Science itself, as tending to produce and perpetuate invidious distinctions among men, giving to the few undue ascendency over the many. Under this idea, legislatures have thought it necessary to confine all appropriations of money for the benefit of education to the common schools, on the ground that the higher institutions of learning are not for the benefit of the people at large, but only for the wealthy and privileged classes of society. Demagogues, also, have found a fruitful theme in declaiming against colleges and universities, as institutions intended chiefly for rich men's sons, and therefore they have claimed to be the friends of the people by espousing, exclusively, the cause of the

common schools, and preventing, as far as lay in their power, any of the State funds being applied to sustain the higher institutions of learning.

My object, in the present essay, is to prove that science, in its very nature, tends to promote political equality; to elevate the masses; to break down the spirit of aristocracy; and to abolish all those artificial distinctions in society which depend on differences of dress, equipage, style of living, and manners; to raise the industrial classes to a level with the professional; and to bring the country, in social rank and respectability, to a level with the city. In support of this doctrine, I shall endeavor to show that such is the whole drift and tendency of science, first, in its inventions, and secondly, in its institutions.

I. *The* INVENTIONS *of Science tend to elevate the masses, and to produce social equality.*

Such, I aver, has been the actual effect of the changes which the inventions of science have brought about in our own country within the last fifty years—a period distinctly within my own recollection. These changes have been chiefly effected in the following ways: first, by improvements in the arts of *locomotion;* secondly, by the general *diffusion of intelligence*, especially through the medium of newspapers; thirdly, by an extraordinary multiplication and cheapening of the *conveniences* and *elegancies of life.* Let us review each of these particulars separately, and then consider how far they are due to the labors of science.

We will first look at the effects of *steamboats* and *railroads* in producing social equality. My remarks will be understood to refer chiefly to what I have witnessed in Connecticut—a district to which my field of observation has been for the most part limited. Before the introduction of steamboats and railroads, there was a great distinction maintained between the professional and the industrial classes, and between men of wealth and what were called the common people, in their respective modes of traveling. Men of wealth kept their carriages with their drivers. In these their families took their rides about the town, and in these they made their journeys abroad. Meanwhile the laboring classes, such as farmers or mechanics, jogged along in plain, unornamented, rattling wagons, or rode on horseback. The gentlemen in coaches were looked up to as a superior class of people, with whom those in wagons or on horseback could not presume to claim any acquaintance, or to have any except the most formal intercourse; and those in coaches claimed the privileges of caste, and expected a deference from the other party, corresponding to the difference in their equipages, or if they spoke to them at all, considered it an act of great condescension.

Merchants, when on errands of business, generally rode in the public stages; but this mode of traveling was too expensive for the farmers and mechanics, and was little used by them. Indeed, people of these classes seldom had occasion to go so far from home as to require the accommodation of the public stages; and since they had little intercourse with the educated, and professional, and wealthy classes, in the daily relations of life at home, and still less abroad, the two classes of society recognized as the upper and lower classes, had as little intercourse with each other as though they had been separated by the odious distinctions of caste. Merchants, by frequent visits to the cities, acquired somewhat of the manners of the city, and adopted a style of building, furniture, and dress, which distinguished them from the farmers and mechanics, as much as the professional were distinguished from the industrial classes. The term "countrified" was an epithet of reproach liberally applied by the inhabitants of the cities, even of the smaller cities, to the country people, who, again, conscious of their ignorance of the forms of genteel society, and of the rusticity of their clothing, felt abashed when they came into the presence or entered the houses of the city-bred people. It was my fortune (I do not say *mis*-fortune) to be country-bred, and I well remember my visit, when a boy, to the neighboring city, mounted on a nag whose mane and tail were not trimmed after the city fashion, a pack of boys following me, throwing missiles, and hallooing "Country!"

If we now enter the saloon of a steamboat where the passengers, male and female, are assembled in great numbers, we shall probably be in the midst of people of many different situations in life, varying widely in education and fortune, some city-bred and some country-bred, representing many different professions—the learned and the industrial—mechanics, farmers, lawyers, merchants, clergymen, physicians, judges, statesmen, teachers, with the wives and daughters of each and every class. Yet the people who compose this promiscuous assemblage will differ so little in general appearance and manners, that we shall feel puzzled to assign the peculiar vocation of any, much less to determine which belong to the higher and which to the lower class in society. In fact, this anti-republican distinction is nearly obliterated in our State, and the separation is not now into the upper and lower classes, but into the virtuous and the vicious, the industrious and the indolent, the temperate and the intemperate.

If we enter a railroad car, we may again meet with people of many different vocations, but we recognize no appearance of caste. All mingle together on terms of perfect reciprocity. The intimate

contact into which people of different professions are brought in the rail cars is working most salutary changes in the sentiments of different portions of society toward each other. The scholar takes his seat, unconsciously, by the farmer or the mechanic; they enter into free conversation, first upon topics of common interest, as the weather or the news of the day, but afterward on subjects appropriate to each. The scholar learns of the farmer and the farmer of the scholar, and each makes a grand discovery—the scholar, that the farmer is not half so ignorant as he had supposed, and the farmer, that the scholar is not half so proud as he thought he was. Mutual respect is the consequence, and the desire of a more extended intercourse between people of different professions is increasing, to the mutual benefit and respect of both parties. By the facility with which visits are now paid to the large cities, the people of the country resort to the cities much more than formerly. By this more enlarged intercourse with refined society, the characteristics of provincialism are fast wearing away. The countryman is no longer detected by the coarse texture or rustic fashion of his coat, or the uncouthness of his manners, or the peculiarities of his dialect and pronunciation. The refinements of taste, also, are rapidly spreading over the interior. Handsome houses, genteel furniture, and refined habits of living, have made wonderful progress in the interior of our State within a few years. There is scarcely a village in Connecticut where we may not find families living as genteelly as the better class of families lived in the city of New York fifty years ago.

Not only has there been great progress all over the country within the period of steamboats and railroads, in a taste for the embellishments of art and the refinements of civilized life, but the steamboats and railroads have themselves furnished the means of gratifying that taste. They have enriched the country by greatly enhancing the value of its productions, both mechanical and agricultural. How have they opened to this generation the exhaustless riches of the Mississippi Valley, and filled all New England with thriving manufactories!

We will next contemplate the changes which have occurred within the last fifty years in the general and rapid diffusion of intelligence among the industrial classes. Within my recollection the progress of a piece of foreign news, from the metropolis to the interior of Connecticut, was something like the following: The New York papers containing it traveled slowly in the stages, stopping over-night, until in the space of two or three days it reached Hartford. Then in the course of a week it was republished in one of

the weekly papers, of which there were two, but none were issued oftener than once a week. A post-rider, on horseback, distributed this paper among the country people, several farmers in one neighborhood frequently making a single paper a joint stock concern. From two to four weeks generally elapsed before an article of news reached the heart of New England, after it was first known in New York or Boston; and a very large proportion of the inhabitants took no newspaper, and hardly received the tidings in any way, except by an indefinite rumor. Steamboats first gave an increased speed and range to newspapers, and at a later day railroads have so augmented both, that there is scarcely a village in New England where the New York morning papers are not read before night on the same day. Moreover, with the means of indulgence, the appetite for news has been wonderfully excited, so that a daily newspaper from New York or Boston, or issued in the town, has become to almost every man in New England one of the necessaries of life. The consequence is, that the country people are no longer looked down upon by the people of the large cities as "behind the times;" as knowing nothing of what is going on in the world, since a few hours only intervene between the merchant on change and the farmer at the plow, in the remotest parts of New England. The effect thus begun by steamboats, and continued by railroads, in elevating the country to an equality, in social condition, with the city, the *telegraph* has completed. In no important piece of intelligence is the country—east, west, north, or south—more than a few hours, seldom more than a few minutes, behind the metropolis. In no respect is the equality of the country and the city, produced by the inventions of science, more conspicuous than in this. In places where but thirty years ago the untamed savage or the wild beast roamed, in the remote districts of the West, the arrival of an Atlantic steamer at New York, or the results of the morning stock-board are matters of familiar conversation within two or three hours after they are first known at the Merchants' Exchange.

We will take but one example more to illustrate the great change in the social condition of all classes of the American people, which the last half century has produced, and that respects the effects of science in rendering the conveniences and elegancies of life accessible to the many instead of the few. It must be obvious to every observer, that we of the present generation feed on better fare than our fathers did, wear vastly finer and better clothing, live in far better houses, and enjoy infinitely more of the comforts and even the luxuries of life, to say nothing of the embellishments of taste (which formerly were exclusively within the reach of the rich and

great), and with all this we do not labor half so hard as our fathers labored.

The facts which have been adduced are sufficient to show that *something* has, within the last half century, greatly elevated the privileges and enjoyments of the masses of our countrymen, and produced a far greater equality in the social condition of the laboring, in comparison with the wealthy classes, and vastly augmented the intelligence and respectability of the country, in comparison with the city. Now, the only question we have to examine is, has *science* done it? I do not say that science would have done it, to the same extent, except in a free country, enjoying all the blessings of a free government; but in *our* country I do say that these happy changes have been the true and legitimate results of science.

We have seen that the changes described have been the immediate results of steamboats, and railways, and the magnetic telegraph, and improvements in manufactures, by means of labor-saving machines, and the introduction of various chemical arts. But how came society in possession of steamboats, and railways, and locomotives, and telegraphs? Who have chiefly been the inventors of the labor-saving processes which have secured such cheapness to the comforts and elegancies of life, as to place them within the reach of every man of moderate fortune, whereas before, those who wore fine linen were only the rich and the noble? Who invented the steam-engine itself? Watt, a philosopher, a man of science. Who applied it to steamboats? Robert Fulton, a man thoroughly versed in the science of mechanics. Who applied it to railroads? The scientific engineers of England. Who invented the electric telegraph, by which the country is raised to an equality with the city? It was Morse, a son of Yale. Who invented the cotton-gin, by means of which, not only have the cotton planters been enriched, but every one who wears a cotton garment derives benefit from the invention, in the cheapness of the article? It was Eli Whitney, another son of Yale. Who have substituted the modern art of bleaching—the work of a day—for the slow, tedious, and expensive methods formerly practiced, and have thus cheapened clothing, and helped to reduce the price of fine fabrics, so as to bring them within the reach of everybody, and have contributed greatly to reduce the price of writing and printing paper, and thus to promote the general diffusion of knowledge by books and newspapers? This immense improvement in the art of bleaching was a present which Chemistry made to the arts. Mineralogy and Geology also have contributed their share, by laying open new beds of coal, for feeding the fires by which the steamboat and the locomotive are impelled; and Chemistry

and Natural Philosophy unite their powers in investigating the laws of heat, and in contriving apparatus to render its applications most effective and economical.

Some will acknowledge that a few men of science, of a practical turn of mind, have contributed to the elevation of the masses by their useful inventions, while they can not see how men who are pursuing science in the abstract, as it is taught in our colleges and universities, are doing any thing for the general good. But if we go back one step beyond the inventors themselves, we come to the original investigators of the *principles* from which their inventions sprang. In the steam-engine we must go back of Mr. Watt to Dr. Black, the chemist, who investigated the laws of steam, without a knowledge of which it could never have been successfully employed as a mechanical force. In the telegraph, we must go back of Mr. Morse to Franklin and others, who discovered the properties and laws of electricity. If we admit that Hadley, a philosopher, presented the sailor with his quadrant, we must not forget that back of Hadley was another philosopher of the closet, who developed the optical principles upon which the quadrant depends. If it is granted that he who calculated the nautical tables, by which the mariner finds his place on the ocean, is a practical man, it must be granted also that the mathematician is a practical man, who furnished the calculator with his rules, and still more the astronomer, who determined the motions of the heavenly bodies, upon which the tables are founded, and, most of all, Newton and Laplace, who discovered and developed the great principle of gravitation, that enabled the astronomer to fix so accurately the places of the heavenly bodies. Thus science, in its very nature and in all its forms, whether cultivated by the recluse philosopher in his laboratory, or applied immediately to the wants of society, in the form of useful inventions, tends to equalize the gifts of Heaven, and to produce social equality among men.

2. *The* INSTITUTIONS, *no less than the Inventions of Science, tend to elevate the masses and to produce social equality.*

It is no doubt true that some of the universities of Europe, under absolute governments, or amid powerful aristocracies, confer peculiar privileges on the sons of the nobility; but in the United States we neither know nor acknowledge any such order, and nowhere in our country are the accidents of birth and fortune less thought of than in our colleges. In what I say on this subject, I shall, indeed, have more particular reference to Yale College, where I have had full opportunity for observation for a period of more than forty years; but, no doubt, most of my remarks will be applicable alike to all our higher seminaries of learning.

In the first place, nearly all our older American colleges are charitable institutions, founded and sustained by the contributions of the pious and benevolent; and if among them there have been some men of wealth who, either during their lives or at their death, have given largely to such institutions out of their treasures, yet they have always, it is believed, been of the number of those who have least desired to promote colleges for the exclusive benefit of rich men's sons. The cause of useful knowledge, the general elevation of society, the interests of the Redeemer's kingdom—these are the motives which have generally, if not always, influenced those who have endowed colleges.

In the second place, the *terms* on which our colleges offer an education are fixed at the lowest possible rate, in order that men of small means may have the opportunity of educating their sons. At Yale College, the rate of tuition is fixed at a price much lower than is paid in academies and private seminaries of learning; and from this low rate there are numerous instances, in cases of pressing indigence, where a part or the whole price of tuition is abated. Moreover, there are funds held in reserve for the express purpose of enabling poor men's sons, of fair promise, to secure the blessings of a liberal education. It is for the same great object, namely, that the college may have the power of aiding by its funds indigent young men, that the salaries of its officers are fixed at a rate adequate only to a bare support, and often, indeed, below what is required for the support of a family on a moderate scale of respectability. If there is any one point where, at present, the colleges of New England are more especially emulous of each other, than on any other point, it is in affording the greatest encouragement to indigent young men. We have opened to such candidates so many opportunities for helping themselves, and released them from paying the college bills to such an extent, that every year examples* are afforded of students who have passed through college, and fully shared in its advantages, without any resources beyond their own earnings.

In the third place, it is not rich men's sons, as a class, that enjoy at our colleges the greatest measure of respectability, but it is the sons of farmers, mechanics, clergymen, and other men of moderate means; and, in fact, frequently among the most respected are those who, in order to pay their expenses, do every sort of work which they can obtain, such as ringing the bell, sawing wood, and taking

* These, however, are to be considered as remarkable examples of talents united with enterprise; to be very destitute is, in most cases, a great embarrassment and affliction to the student, and sometimes seriously impairs his scholarship.

care of the public rooms. Nor, in the distribution of college honors and distinctions, is the question ever raised whether the candidate is country-bred or city-bred; whether he is the son of a rich man or a poor man; whether his father is a high officer of state or in a menial condition. And since the sons of the industrial classes are usually brought up to greater habits of industry, and with a higher appreciation of the value of time, the students of those classes do in fact share more largely in the college honors and distinctions, and enjoy a higher degree of consideration than the sons of the rich and great. I venture to repeat, that nowhere on earth are men estimated more exactly according to their true merit, independently of all considerations of family or fortune, than at Yale College.

But, in fact, our colleges are not, as is supposed by some, made up of rich men's sons. Without pretending to be very accurate, I would, for a general idea, distribute the students of Yale College into the four following groups: The first quarter may consist of the sons of the decidedly rich, although this I believe to be much above their true proportion. The second quarter may be allotted to the better half of the middling class, who, although not accounted rich, are able without inconvenience to pay the expenses of their sons' education. The third quarter may be assigned to the lower half of the middling class, sons of substantial farmers and mechanics, who, nevertheless, find themselves somewhat straitened to meet the expenses of their sons at college. The fourth class may be composed of such as are decidedly indigent, who work their way through college by a severe economy united with various self-denying expedients for defraying their expenses, and, in many cases, come to the end of the race with a considerable debt upon their shoulders. Foreign universities may abound with sons of the nobility, but to represent our American colleges as institutions devoted to the rich is false in fact.

In the fourth place, if we now follow the men educated at our colleges into life, and view them on the great field of action, it will not appear that the sons of the rich are particularly prominent above the sons of the poor. I apprehend it will be found that, as a class, they make a less figure than either of the other quarters into which we supposed the whole to be distributed. If, by the aid of the triennial catalogues of our colleges, we endeavor to ascertain who among successive college classes have become most eminent, I think they will prove to be those who have come from the industrial professions, or from families who are alike removed from great wealth and excessive indigence, although there are occasionally striking exceptions in both extremes. Or if, instead of endeavoring to form this com-

parison by so imperfect a guide as the triennial catalogues, we look abroad upon the face of society itself, and see who are actually occupying the posts of usefulness and have attained the highest stations of eminence in church and state, we shall be convinced of two facts: First, that the men who are at this moment exercising the greatest influence in society, in the cabinet of the United States, in the halls of Congress, on the bench of justice, in the State governments, divines, physicians, lawyers, instructors of youth, are, in great proportion, such as have been trained at the higher seminaries of learning; and, secondly, that these have, in a majority of instances, ascended from the classes of society which lie below the wealthy class. What has made them what they are? What has taken them from the obscurity in which they were born, and given them such ascendency in the Republic? What but these very colleges and universities, which are denounced by demagogues and neglected by legislatures, as institutions which are designed chiefly for the benefit of the rich, while the common schools only are deemed worthy of legislative patronage, as institutions which confer their benefits on the people at large—on the *many* in contradistinction to the *few*.

Nothing, again, is more unjust to the higher seminaries of learning, than to represent them as the enemies of popular instruction. Their sons, whenever they have a voice in legislation, are almost always the most liberal promoters of popular education, and labor most assiduously in behalf of the common schools; and the colleges themselves have the highest interest in elevating the standard of popular education, for it is from the more intelligent portions of the community that they derive both their funds and their pupils.

I will only add, that I look upon all the institutions of learning—the common-school, the academy, the normal school, and the university—as acting and re-acting on each other like the grand powers of nature, and all as deserving of the highest possible aid from every enlightened government.

IV. ON IMPROVEMENTS PRACTICABLE IN AMERICAN COLLEGES.*

BY F. A. P. BARNARD, LL.D.,

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THE subject of collegiate education in the United Sates is one which, for the last thirty years, has occupied a large space in the public mind. Within that period our college system, in form as it exists, has been made a subject of frequent and severe stricture; and the question has been seriously raised, whether this system is not inadequate to accomplish the ends of higher education, and even whether it is not incapable, without a radical reorganization, of being brought into harmony with any system by which these ends may be better secured. On the one hand, among the people themselves, there has sprung up a demand for something more practical, something which shall specifically fit men for the ordinary occupations of life, which shall prepare them to become at once mechanics and farmers, engineers and manufacturers, as well as to enter upon what are called the learned professions. On the other hand, that more limited class of men among us, who have pursued the study of letters or science far beyond the limit at which the multitude pause, have painfully felt, in the prosecution of their efforts for self-improvement, the want, under which our country labors, of those aids to higher acquisitions and profounder learning which they see so abundantly to exist in foreign lands. They, too, have naturally first looked to our colleges, in the hope of being able to elevate them, or some of them, to the rank of schools for men—schools embracing, within the range of their teaching, the entire circle of human knowledge, and capable of conducting the inquirer, in every department of the intellectual field, to the utmost limit which discovery or investigation has yet reached.

The practical men, again, seduced by the plausibility of their leading idea, and dazzled by the splendor of those achievements by which modern science has, under our own immediate observation, been recently urging forward, with a rapidity almost miraculous, the world's progress in all the useful arts, have declaimed loudly against

* A paper read before the American Association for the Advancement of Education, New York, August 31, 1855.

the value of classical learning, and even demanded its entire exclusion from the course of collegiate instruction. Scholars, on the contrary, have complained that the attention bestowed upon these subjects is already too small; that the study of the ancient languages has a value, as a means of mental development, which nothing can adequately replace; that the space given to this study is less now than it was forty years ago; and finally, that, to the opprobrium of our system of higher education, examples of sound and thorough classical scholarship, among our graduates, are beginning to be the rarest of all phenomena.

In the mean time our colleges, embarrassed by these opposing pressures, have yielded, sometimes in one direction and sometimes in another. Nearly all of them have greatly enlarged the circle of studies which they undertake to teach, and some of them have conceded to their students the privilege of selecting, from among the number, those which they prefer to pursue. The result has been such as is the usual fate of all compromises, and such as must invariably attend the effort to accomplish what is impossible. None of the complaining parties are satisfied. The college still fails to furnish the special and technical education which the practical man requires, and it still more lamentably fails to provide for that higher culture which is supplementary to mere intellectual training. It is evident that there has been error somewhere, either in the original and fundamental idea of the college itself, or in the more recent modifications of its plan of operations. In our general system of education, the college has either a proper and peculiar function to fulfill, or it has not. If it has, it can neither step aside from this, nor rise above it, without leaving a space which must be occupied by some institution designed to do the work it leaves undone. If it has not, then we have been in error on this subject for two hundred years.

In considering the topic which has been assigned to me, it is proper, first, to observe, that if our collegiate system is in fact materially defective, there exist certain serious obstacles in the way of any sudden and sweeping reforms. Could we agree upon the measures which ought to be adopted, we have none but a moral power to enforce their introduction. No royal or imperial decree can be resorted to, to control the operations of our colleges, or constrain their universal assent to any material innovations. Truth is, indeed, powerful, and will ultimately prevail. But truth is as slow as it is powerful, and the lessons of history admonish us that its triumphs are often long delayed. Our colleges are bodies not only independent of each other, and independent of any general controlling

power, but they are also, for the most part, independent of the authority of the local legislatures of the States to which they belong. Though chartered by legislative enactments, few legislatures have reserved to themselves the right to look into or direct their operations; and, if all had done so, the power would still have been divided among more than thirty distinct State governments.

The arrangements of colleges are not even, to any great extent, in the hands of their own faculties. They are subject to the management of Boards of Governors, Overseers, or Trustees, men usually selected, no doubt, because of their presumed fitness for their stations, and because of the interest they are presumed to take in the cause of education; but whom it has, nevertheless, been found hitherto impossible to induce to devote any large amount of their attention to the institutions under their care. These are the men whom truth must reach before reforms, if they are desirable, can be made certain.

Nearly all our colleges are, furthermore, the creations of the different religious denominations which divide our people. They are regarded as important instrumentalities, through which the peculiarities of doctrine which distinguish their founders are to be maintained, propagated, or defended. It is this which has led to the great multiplication of collegiate institutions in our country, and which is daily adding to their number. It is this which has secured to them their endowments; and though we may regret to see the public munificence thus divided and scattered among many feeble institutions, instead of being concentrated in a few which it would suffice to elevate to the highest rank, yet we must not forget that, in the absence of a motive more powerful than mere devotion to the cause of education, this munificence would have been in a great measure withheld. Facts which have fallen under my immediate observation satisfy me, that this religious element, mingling itself with our system of collegiate education, is powerful enough to interpose a difficulty, almost insurmountable, in the way of all those wise and liberal projects by which it has been hoped to secure a system of perfectly free education, of the highest order, open to all at the expense of the State. I am persuaded, that if every State in the Union were to establish for itself a college, furnished with every appliance for imparting instruction, on the most liberal scale, and officered by the highest talent the country affords, providing, however, as it must, against the intrusion into such an institution of any sectarian bias, it would fail to divert, to any great extent, from existing institutions, the patronage which they now receive, and would fail to prevent the erection of new ones upon the same principle.

Again, it must be admitted that our college system, such as it is, whether good or bad, has taken a strong hold upon the confidence of the people. Though an acknowledged offshoot of a foreign system, it has struck its roots deep among us, has accommodated itself to our circumstances, and has proved itself, upon the whole, a thriving plant. If it has been made a subject of complaint, we must not fail to bear in mind that, in all questions of reform or revolution, it is the discontented few who make themselves heard, while the contented multitude live on in silence. Before any large changes can be introduced into our present system, popular opinion is to be extensively operated on, and fully satisfied of their necessity.

This system, then, must be accepted as an existing reality—a reality which we can not set aside or refuse to recognize, if we would, as a part of our general system of education. It is strong in a pecuniary sense. I suppose that no less a sum than fifteen millions of dollars—probably much more—has been already invested in it, and is interested in its preservation. It is strong in a moral sense, having enlisted in its behalf the convictions of the great majority of our citizens, in favor of its substantial value. It is peculiarly strong, in its alliance with the religious sympathies of our people. Our business, then, is not to inquire, what we would do if we had the work to begin anew, but what shall we do with the thing which we have? If, in the comprehensive scheme of general education which we desire to build up, commencing with the rudiments of knowledge and ending with its largest expansion, our colleges occupy an anomalous position; if they fail to interweave themselves with the schools below, taking the learner where they leave him, and carrying him forward in the equable development of his mental powers to the point where—at least until we are provided with institutions of a still higher character—he must be left to educate himself, we must endeavor gradually to mould them into the shape we would have them assume. And if we can not force them to extend themselves downward—as I believe we can not—so as to secure a more efficient performance of the work which we call preparatory, nor upward, so as to do that work for which we have yet made no provision at all, we must not regard these things as evidences of the defects of our college system, but as proofs that our general system itself is wanting in completeness.

The suggestions which I have to offer will be, therefore, entirely simple, plain, and practical, and will be founded on the assumption, that there is a specific function which the college ought to fulfill. This function is the systematic development and discipline of the faculties of the mind, in due proportion and in a natural order. And

the first question which we have to settle, in regard to it, is, obviously, *What course of instruction* is best adapted to secure this result? Now much of the discussion which has, of late years, agitated the public mind on this subject, seems to me to have originated in an entire misconception of the proper business of a college. If such discussions had, in all cases, ended, as they began, in words merely, allusion to them here might be unnecessary. But this is by no means the case. In a number of instances they have resulted in breaking up the long-established and time-honored course of collegiate instruction, and substituting in its place something new and materially different. Nor yet could this be a subject of reasonable complaint, provided that, in the novel schemes, we could find evidence of a distinct recognition of the proper function of the college. But so far is this from having been the case, that the entire argument, by which these innovations have been urged and indicated, has been founded on the tacit assumption, that the college has no such proper function. It has, for example, been maintained, with a great deal of warmth, that our colleges have, in later years, failed to keep pace with the rapid progress of human knowledge; that the subjects of study, to which they mainly confine the student, are in part obsolete and in part useless; that they take no account of the prospective pursuits of the young men whom they undertake to train, but subject all alike to the same unvarying intellectual regimen, and, in short, that they are far in arrear of the demands of an eminently utilitarian and practical age. We have, accordingly, been accustomed to hear the value of classical learning discussed, as if its only claim to attention lay in the directness with which it is capable of being turned to the pecuniary advantage of its possessor; and we have heard the usefulness of the higher branches of the mathematics brought to the same test by which we would judge of arithmetic, surveying, or the principles of machinery. How, it is demanded, will it help a man, in this stirring world, to have spent some of his best years in the perusal of Greek and Latin authors? How will it help him—even to communicate with his fellow-men—to have attained any degree of proficiency in the use of languages, in which men have long since ceased to communicate? Or, how will it contribute to his success as a lawyer, as a physician, as a merchant, or as a divine, that he is deeply versed in the mysteries of mathematical analysis, or familiar with the theory of the lunar perturbations?

All this course of argumentation rests, it will be observed, on a simple *petitio principii*. It is taken for granted that the college course ought not to embrace, and was never intended to embrace, any thing which should not be capable of a direct practical appli-

cation, in the business of life. This postulate being granted, the triumphant conclusions of the objectors are at once legitimate and unavoidable. And not only so, but those who persist in advocating the perpetuation of our present system of college education, however in other matters they may be respectable for their intelligence, must, in regard to this, be admitted to be wanting in common sense.

But no such postulate can be received. The studies condemned were never selected, nor is their selection now defended, on the ground that they are to form any necessary and immediate element of those pursuits by which the learner is, in after life, to gain his daily bread. They were selected because of their pre-eminent value as instruments of mental discipline. It is unnecessary for me, on this occasion, to enter into any argument, upon a subject which has already been so often and so ably discussed, and in which I should only travel over ground which has been beaten again and again. I hold it to be time that, on this question, we should be permitted to believe, that there are certain principles, too well established to leave room for further controversy; and, for the sake of explicitness, though they may now be regarded as sufficiently elementary, I will venture to recapitulate them here.

1. Education, in its widest sense, signifies the development, discipline, and cultivation of all the powers and faculties of man, physical, mental, and moral.

2. Intellectual training, which is that which for the moment concerns us, implies the exercise of the mental powers, in a natural order, and in just proportion, upon subjects of thought.

3. The subjects which furnish the most beneficial discipline are not necessarily, nor even usually, those which are most immediately related to the ordinary pursuits of men in life.

4. Though, in the process of education, we necessarily impart knowledge, yet the best education by no means implies the largest amount of that knowledge which the world calls practical.

5. In arranging a plan of studies, designed to furnish a complete system of intellectual discipline, the question, How far the subjects selected may have an immediately practical value, is one of secondary importance. But,

6. Other things being equal—that is to say, when the choice is between subjects of similar disciplinary character—that which affords the largest amount of useful knowledge is of course to be preferred.

Assuming these principles to be true, I say then that the business of our colleges is to educate, and not to inform. And no argument, which goes to decry the freedom with which they employ mathe-

matical or classical studies, as instruments of mental discipline, on the score that these subjects are less practical in their nature than something else might be, is valid, until it shall have been shown—a thing which has never yet been done—that this something else has an equal educational value with the studies so denounced. I am not prepared, therefore, to assent to the judiciousness of any of those proposed changes of our present plan of college education, by which the amount either of classical or of mathematical study, now exacted, shall be materially diminished. And, entertaining these opinions, I am equally unprepared to admit the propriety of abolishing the *curriculum* of study, or even of introducing parallel courses of study, if these courses are to run through any considerable portion of the time now devoted to college education.

The necessity of a curriculum is one which grows out of the nature of things. Experience has shown, that a certain amount of faithful labor, expended in due proportion, under the direction of minds already proficient, upon a suitable variety of subjects of human knowledge, properly selected, is sufficient so far to accomplish the main ends of education, that the student may be safely afterward abandoned to his own guidance. But this due proportionment, this suitable varying of subjects, can not with propriety be left to the arrangement of chance. These things must be matters of previous regulation and adjustment; and this regulation and adjustment, however they may be made, must end in the creation of a curriculum of study. Another consideration conspires to the same result. If education is to have any system, if the Degree, which is the certificate of the highest education for which our system provides, is to have any definite meaning, and is to be an evidence that he who receives it has been subjected to a mental training comparable to that of any other graduate, then there must be some standard of comparison to which all may be brought, and by which their fitness for graduation may be tested. Such a standard is found in the curriculum, either when, as in the English universities, it serves to guide the final examinations of all candidates for graduation, or when, as in most American colleges, a record is preserved of the daily performances of every student, upon each subject which it embraces, for use at the termination of the course.

A curriculum being, therefore, an evident necessity, it is next in order, to consider the principles upon which it should be constructed. These appear to be the following:

1. The curriculum should embrace the number and variety of studies properly disciplinary, and the amount of each, which is necessary to an adequately thorough intellectual training. In the

choice of these, the question, How far they are practical, is to be made entirely subordinate to the higher objects of education.

2. It should *not* embrace a greater amount than can be well and completely mastered, within the period of time over which it is spread.

3. The foregoing condition being fulfilled, it *may* embrace other studies, chosen simply because of their value as subjects of knowledge.

If, therefore, our course of collegiate study is to continue to be restricted to a definite term of years, and if the space of time allotted to it is to be no more than sufficient for the purposes of a thorough intellectual training, we are evidently driven to the necessity of denying the propriety of selecting any studies, to form a part of the course, simply on the ground that they are practical.

Let it here be observed, that I am employing the word practical, in this place, in that entirely utilitarian sense in which it has been so much used in public strictures upon the American college system. But I am by no means of the number of those who would withhold this epithet, when understood in its largest and most liberal sense, from any of the studies which we require our students to pursue, however little affinity they may seem to have to those occupations in which the same young men are to become immersed, so soon as the period of their college education is past. Nothing can possess a higher practical value, to any man, than that which makes him a man, in the fullest sense of the word; which gives him habits of clear, systematic, and independent thought; which sharpens his penetration, invigorates his powers of reasoning, teaches him to analyze, chastens and refines his taste, subdues to method his insubordinate imagination, and confers upon him the priceless gift of lucid and forcible utterance. Considered from this point of view, the studies of the college course, however abstract, barren, or profitless they may appear, to a superficial observer, possess a practical value of the very highest and most inestimable character, since their beneficial effects are spread out over the entire life, and are daily manifest in every variety of circumstances by which men are surrounded. If we compare the success in life of the few—for it is but a few after all—who have early enjoyed the advantages of the training which our colleges afford—the average eminence which they attain, in their respective professions and pursuits, the labors by which they command the attention of mankind, the variety and extent of the researches in which they engage, the boldness and success with which they push inquiry into the regions of the unknown, the controlling influence which they often exert in

public affairs, and all those various modes in which a cultivated mind displays its superiority over matter and over other minds—if we compare these things with the degree to which the same things are, upon the whole, true of those who in youth have been denied similar advantages, we can not hesitate to attribute the observed results, in the main, to that early mental discipline which is furnished by these very studies, which we are so accustomed to hear denounced as wanting in practical value. Nor will it be any reply to this, to point, on the one hand, to those, for we need not go far to find them, whose college education has failed to lift them above a respectable mediocrity of standing; nor, on the other, to those more remarkable individuals who have risen to eminence in spite of the deficiencies of their early education. If nature has made men essentially small, no education can render them great; or if gifted youths choose to neglect their early advantages, or to idle away their subsequent lives, the consequences of their neglect, or their indolence, must rest upon them. To use again the names of such men as Franklin, and Watt, and Hugh Miller, as arguments to depreciate the value of collegiate education, is no more to the purpose than it would be to declaim against common schools, because some persons have taught themselves to read. The true form in which to place the argument is this: If these men have done so much without education, what might they not have done with it!

The question then arises, How far it is true that the curriculum of study, in our American colleges, is consistent with the principles according to which I have ventured to assert, it should be formed. I speak of our colleges in general, as if they prescribed to themselves, in all cases, the same invariable programme; and this is so far a fact as to relieve me of the necessity of specifying any minor differences which may exist among them. It is, in the first place, true, that when we compare the list of college studies, as we find it to-day, with what it was fifty or even thirty years ago, we observe it to have been, in the mean time, very greatly extended. We do not find, however, that the additions which have been made to it are in all, or even in most cases, of that class of studies which may be properly called disciplinary. They consist, for the most part, of those branches of Physical Science, or of Natural History, which have received, in these later years, so large a degree of development. It may be added, moreover, that a much more considerable space is at present given to modern languages than was formerly allowed; and that Civil Engineering, a purely practical science, has come in for a material share of attention. Considered in a merely educational point of view, the additions must be pronounced to be

uncalled for and unnecessary. At the same time, while no one can deny the great value of the knowledge which they embrace, we can not regard the proposition, to discard them entirely, with unqualified favor. They happen, moreover, to be the subjects most favorite with those, among the people, who complain most loudly of the existing course of study; and were we to abolish them, we should excite a still more emphatic expression of disapprobation.

But it is to be observed that, while so large additions have been made to the amount of labor to be performed, there has been no corresponding increase of the time allotted to the work; and the question will unavoidably arise, Is it possible that all this time can have been usefully employed half a century ago, if at present we find it sufficient to enable us to accomplish so much more? And if it was so then, do we not deceive ourselves, when we imagine, that we do in fact accomplish what we propose to ourselves now; and have we not barely increased the surface over which we skim, without any longer penetrating to an equal depth? If this is true, and that it is so, we have the publicly expressed convictions of many of our most eminent educators, is it not a matter of self-evident and urgent necessity, that the existing state of things should be in some manner modified, without further delay?

It must be observed, that the modern additions, to the course of study, are mainly valuable, as they contribute to the amount of the student's knowledge, and not especially so, as a means of mental discipline. If the course is to be reduced, and if in this reduction these studies are to be retained to the present extent, or if, as is sometimes demanded, they are to be even more widely expanded, the consequence will be, that the properly educational feature of the system will disappear, and we shall convert our colleges into institutions for pure instruction. This will be to abrogate our system of higher education altogether. If, again, we effect the reduction by throwing out these subjects, to which popular opinion has attached so high and, it must be admitted, so just a value, then we must deny, to the generality of our youth, the only opportunity which seems at present to be open to them, to acquire a species of knowledge, which appears to have become indispensable to every well-informed man. The subject appears thus to be beset with difficulties upon every side.

Two expedients appear to present themselves, through which to obtain relief. In the first place, we may lengthen the period allotted to college education, extending the course of study over a larger number of years, definite or indefinite. Under this arrangement, the later years may be devoted more particularly to providing

the furniture of the mind, while the earlier may be mainly devoted to the development and discipline of its faculties. That we shall meet with objection, on the score of the increased expense which will thus attend the education of a youth, is a thing to be naturally expected; yet I do not see, that this objection is entitled to any very serious consideration, when weighed against the absolute impossibility of furnishing at all the education demanded, upon any more favorable conditions. Of the many subjects which we now undertake to teach, it is notorious that not a few are taught more in pretense than in fact. And I believe it to be true, beyond contradiction, that, in order to do even so much, we have greatly detracted from the thoroughness with which the absolutely indispensable disciplinary studies, the Latin and the Greek, Geometry and its applications, Rhetoric, Logic, and Metaphysics, were once taught, in the same institutions. If the impatient public were to demand, that we should reduce our course to three years, because it would be cheaper to the patrons of colleges, that would afford us no justification for attempting to comply with the demand. It is our business, not to try to control, but rather to conform ourselves to the laws which regulate the human mind; and we can no more crowd a definite amount of instruction into a space too small to hold it, than we can force a quart of matter into a pint cup.

But secondly, we may endeavor by degrees—for a change of this kind must be gradual—to increase the exactions required for admission into the lowest class, until, after a time, we shall have forced the preparatory schools to do the entire amount of work now accomplished in the first, or perhaps the first and second years. This suggestion may possibly find more immediate favor than the preceding, and, in point of fact, it has long been a fixed policy, in some of our colleges, to pursue a course tending in this very direction. The progress thus far made has, however, been slow—slower than the exigencies of the case require, and slower than even the most cautious prudence demands. A certain timidity has seemed to control the better judgments of those who feel most sensibly the necessity of some sort of relief from present embarrassments, growing possibly out of the apprehension—which is doubtless to some degree well founded—that, unless the movement should be simultaneous and general, it would result in loss of patronage to the institution which should take too decidedly the lead. This danger might be obviated by a common understanding, entered into by the managers of different institutions, determining definitely the steps by which the desired change should be effected. It is not to be denied, however, that the expedient I here propose would be much

more easily reducible to practice, in those parts of our country, in which there exist permanent preparatory schools, of a superior grade, than in those large portions of the West and South, where such schools are for the most part temporary, and are too often in the hands of instructors incompetent to the task which it is proposed to assign to them. In England, a great part of the purely disciplinary study is accomplished in such schools, as those of Eton, and Harrow, and Rugby; and were not this true, it is very questionable, how far the university system, as it has been in past years carried out at Oxford and Cambridge, could supply the defect. In Germany, the same work is done in the gymnasia, which rank, in most important particulars, as high as our colleges, and in some even higher. If we are ever in this country to have universities, approaching in plan, to those of the latter country—at least, if our colleges, or any of them, are ever to be elevated to any thing like such a rank—it can only be by ceasing, in great measure, to be what they are, schools for intellectual training; and this can only be possible when they shall, by pursuing some such course as I have suggested, have forced into existence a lower order of schools, capable of doing very much of their present work for them. Whether this will ever be, or whether it is desirable that, to the full extent of the transformation implied, it should be, are questions which I shall not undertake to answer. That a change can be carried beneficially to the extent I have proposed, I am, however, fully persuaded.

In connection with such a change, or even in fact without it, it seems to me important, that the rules which determine the age, at which youth are admissible to our colleges, should undergo revision. Most of our colleges receive candidates for admission at the early age of fourteen. In some few, the minimum age is as high as sixteen; and I am confident that it ought never to be lower. Much of the disheartening difficulty, which is incurred by the youthful student, in some parts of his collegiate course, is unquestionably to be ascribed to the immaturity of mind which he brings to its encounter. The remedy for this evil is so easy, and the evil itself has so often presented itself to many thoughtful minds, that I limit myself to this bare allusion to the subject.

[To be continued.]

V. HISTORY AND SYSTEM OF POPULAR EDUCATION IN UPPER CANADA.*

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THE political union of the Canadas, in 1840, did not include an educational union of Upper and Lower Canada. They have ever been two distinct educational provinces. Their populations have also been dissimilar in race and language, and their educational policy and success equally varied. I will, therefore, for obvious reasons, confine myself exclusively to the history of popular education in Upper Canada.

The earliest references to education, in Upper Canada, describe it as of a very inferior character, and but scantily diffused throughout the country; this was chiefly owing to the sparseness of the population and the remoteness of the new settlements. Even until within a very few years, the opening of the winter school in a settlement was a matter of great public concern, and a subject of neighborhood gossip and speculation for months before.

At a very early period in the history of the Province, and but thirteen years after the declaration of American independence, a memorial was presented to Lord Dorchester, the then Governor-General of British North America, stating the deficiency of all means of instruction, and requesting his Lordship to establish a school at some central place, such as Kingston—opposite Cape Vincent—which was then the principal town in Upper Canada.

In compliance with this request, Lord Dorchester gave directions to the Surveyors-General to set apart eligible portions of land for the endowment of schools in all the new townships.† These lands, however, remained unproductive, and before any benefit could be derived from this solicitude of the Governor-General, Canada was

* This article is the body of a paper read before the American Association for the Advancement of Education, New York, August, 1855. A few introductory paragraphs, in which the author eloquently sketches the comparative progress of Ireland, Scotland, England, Canada, and the United States in the cause of popular education, are necessarily omitted for the want of room. The paper will appear entire in the proceedings of the Association above named.

† Hawkins' Annals Colonial Church, p. 181. By a singular historical coincidence, it appears that in the same year, 1789, an Act was passed in the State of New York, setting apart two lots in each township for gospel and school purposes.

divided, by the Constitutional Act of 1791, into two distinct Provinces.

In 1796, the Imperial Government, in a letter addressed by the Duke of Portland to Lieutenant-Governor Simcoe, called his attention to the establishment of schools in various parts of the country. As a response to this appeal, the Legislature of Upper Canada, in 1797, agreed upon a memorial to that monarch, so celebrated in American history, George the Third, for a grant of land for the endowment of a Grammar School for each district, and an University for the whole Province. To the address a favorable answer was returned, and the Governor and chief civil officers were requested to draw up a report on the subject. They did so, and recommended a grant of more than half a million of acres, and the establishment of a District Grammar School in each of the four districts, into which Upper Canada was then divided, and an University at some future time.

Then was first developed, in Upper Canada, that noble policy, peculiar, I believe, to the present century, of a nation solemnly setting apart forever a portion of its rich domains, for the promotion of Christian popular education exclusively. Such an act is only surpassed by the touching solicitude of the early Legislature of Massachusetts, in setting apart the toll of a mill and the rent of a ferry, for the support of the infant University of Harvard College.

It was soon discovered, that even half a million acres of land would only barely endow one Grammar School, land being then only worth twenty cents an acre. The scheme had, therefore, to be abandoned. Meanwhile the principal inhabitants of Kingston determined upon establishing a superior Grammar School in their town, and they obtained a promise from the then Governor, to whom the establishment of a school was an event of even greater public concern than the foundation of a College would be now, that if they would provide a teacher, he would provide a suitable salary. The result was that Mr.—now the Right Reverend Bishop—Strachan was selected as the first Grammar Schoolmaster in Upper Canada. For several years, Mr. Strachan's school was the only one of any reputation in Upper Canada, and in it were educated some of those who now fill the most important places in the Province.

The first legislative enactment, relating to education, was not passed, however, until 1807, and although that act must ever be famous in Upper Canada, as perpetrating an educational anachronism, in establishing Grammar or High Schools, without making any provision whatever for the Common Schools, still it did good service, and was only superseded by a more comprehensive measure, about

two years since. In that year—1807—a law was passed, establishing a Classical and Mathematical School in each of the eight districts into which Upper Canada was then divided, and granting four hundred dollars for the annual salary of the teacher. It is remarkable, that although additional grants have since been made to the Grammar Schools, the first educational grant ever made in Upper Canada—even to the very penny—is still continued to each of these schools. And although there are now upward of eighty Grammar Schools in the Province, yet it is to the original or senior County Grammar Schools alone—of which there are twenty-eight—that the special grant made in 1807 is continued. So much for maintaining public faith with old and valued servants.

In 1816—nine years after the Grammar Schools were established—our educational anachronism was removed, and legislative provision was first made for the establishment and maintenance of Common Schools in Upper Canada. The large sum, in that day, of twenty-four thousand dollars, was annually granted for this purpose, and in the most simple and primitive manner the people were authorized "to meet together" in any town, village, or township, and simply "to make arrangements for Common Schools in such town, village, or township," and secure an attendance of not less than twenty pupils. It also authorized that "three fit and discreet persons" be chosen trustees, who should "examine into the moral character and capacity of any person willing to become a teacher," and appoint him. The trustees were authorized to make rules and regulations for their own school, and select text-books, subject to a District Board of Education, to whom they were required to report. The provincial allowance to each school was in no case to exceed one hundred dollars, the balance of salary to be made up by subscription. No rate-bills or assessments were, however, authorized. This law was considered only as an experiment, and its operation was limited to four years.

Thus, in hesitation and doubt, was sown the seed of intellectual life in Upper Canada, which, though unproductive for a time, and even nearly uprooted by chilling frosts or wild popular commotions, has, by renewed care and culture, developed itself in her three thousand schools, and her half a million of self-imposed taxation for the maintenance of these schools.

At the expiration of four years, it was obvious that the law of 1816 did not produce satisfactory results, or men of narrower minds controlled our public affairs, for, in 1820, another act was passed, reducing the legislative grant from twenty-four thousand dollars to ten thousand dollars per annum, and the teacher's allowance from one

hundred dollars to fifty dollars. And although, in 1819, provision was made for an additional Grammar School, and for educating ten pupils of the Common Schools, free of charge, at each of the nine Grammar Schools already established, yet the provincial allowance to teachers of Grammar Schools was also reduced to two hundred dollars, unless their pupils exceeded ten in number.

Thus ebbed and flowed, without a master hand to stay the current, that tide which, in other lands, is regarded as the nation's life-blood; and thus was permitted to ensue that state of living death by which Upper Canada, in the significant and popular metaphor of the day, was likened to a "girdled tree," destitute alike of life, of beauty, and of stately growth.

In 1822, Sir Peregrine Maitland, the Governor, obtained permission from England to establish a Board of Education, for the general superintendence of the Grammar Schools, and for the management of the University and School lands throughout the Province. This Board prepared some general regulations in regard to the schools, and proposed a plan by which to exchange some of the school lands for the more productive Clergy Reserve Lands. The plan, having been approved by the Home Government, was carried into effect under the direction of Sir Peregrine Maitland.

In 1824, the first attempts toward providing the public with general reading books, in connection with the Common and Sunday Schools, were made. The sum of six hundred dollars was annually appropriated for this object, and authorized to be expended in the purchase of "books and tracts, designed to afford moral and religious instruction." These books were equally divided among all the districts of the Province. Thus were presented the dim outlines of a system of public instruction, which, it was clear, the necessities of the country required, but which, for want of a vigorous and systematic supervisor, were gradually permitted to fade away, without leaving an impress behind, while the legislative enactments themselves were suffered to become obsolete and to be disregarded.

In these fitful efforts may be traced the noble instincts of the Province, to possess herself of an invaluable palladium of civil and religious freedom, and which the apathy or selfishness of her sons alone prevented her from acquiring. We honor her even in her failures, while we learn a valuable lesson from her history—that to intrust the cause of education to the chances of political strife, or to the guidance of self-interested or aimless counsels, is to doom it to shipwreck and destruction.

In 1836 another spasmodic effort was made to revive the dying spirit of education in the Province, and a Commission was appointed

by the Legislature to inquire into the systems of public instruction, in operation in other countries, and to report the result. Dr. Charles Duncombe, the gentleman deputed to perform this labor, visited various States of the Union, and embodied the result of his investigations in the form of an elaborate report, accompanied with an ample corroborative appendix and a voluminous bill, drafted with great care.

As a matter of history and curiosity, it may be interesting to give one or two extracts from Dr. Duncombe's Report, in which he expresses his opinion of the American systems of public instruction in 1836. Dr. Duncombe was an active, intelligent man, and from his personal history must be considered an impartial witness in regard to American institutions. He says—page 11:

> In the United States, where they devote much time and expense to the promotion of literature, they are equally destitute of a system of national education with ourselves. And although, by their greater exertion to impart the improvements made in Great Britain, and on the Continent, and their numerous attempts at systematizing these modern modes of education, so as to lay the foundation for a future perfect system of education, adapted to the institutions of the country, they have placed themselves in advance of us, in their Common School system, yet, after all, their schools seemed to me to be good schools upon bad or imperfect systems. They seem groping in the dark; no instruction in the past to guide the future, no beacon light, no counsel of wise men to guide them, more than we have, upon the subject of Common Schools.

In another place he adds:

> The United States have, according to their public documents, about eighty thousand Common School teachers, but very few of whom have made any preparation for their duties; the most of them accidentally assume their office as a temporary employment.

That our own system of public instruction was equally inefficient was fully admitted; and Dr. Duncombe has recorded the historical fact, in the preamble to the bill which he proposed for the adoption of the Legislature.

The labors, however, of Dr. Duncombe were productive of no immediate results. The eventful crisis of 1837, by which our political horizon was overcast and we were plunged into civil war, prevented the consummation of the hopes which had been anxiously entertained for the resuscitation of our Common School system.

In 1839, the clouds of war and tumult had passed away, and two years after, in happier times and under better auspices, the Legislature passed an act definitely establishing a system of popular education in Upper Canada, and endowed it with ample funds.

Thus was reached the great turning-point in our somewhat checkered educational history; and although the effort was long and

painful, the point, once gained, has never been abandoned. No more hesitation, no more uncertainty has marked our course; and with a true appreciation of the great future before us, and our responsibility and dignity as a people, it is to be hoped that we shall never again neglect an interest so vital, and so important to our very existence, as an intelligent community.

From 1841 to 1844, little was done but simply to discover our original foundations, and to trace out, with more or less distinctness, the former proportions and outlines of the system.

In 1844, his Excellency the Governor-General appointed the Rev. Dr. Ryerson, the present Head of the Department, a Canadian himself, and fully conversant with the wants and capabilities of his native country; he combined rare administrative abilities with extraordinary energy and intellectual vigor. Ardently devoted to the advancement of the Province, he speedily set himself to reconstruct, upon a broader and more lasting foundation, our entire system of public instruction. As a preliminary step, he devoted a year to the examination and comparison of the systems of education in Europe and America, and embodied the results in a "Report on a System of Public Elementary Instruction in Upper Canada." This valuable and comprehensive Report sketches with a bold and masterly hand the whole system of public instruction now in successful operation among us—one which is invariably referred to with pride and satisfaction by our own people, and with admiration and delight by strangers.

We now turn to the present state of education in Upper Canada. The chief outlines of the system are identical with those in other countries, but in its adaptation to the wants of the country and the genius of the people, it is essentially Canadian.

It comprises the three chief classes of public educational institutions—the Common School, the Grammar School, and the University proper—the two former being under the immediate control of the Department, the latter being distinct and independent.

We are indebted, in a great degree, to New York for the machinery of our schools; to Massachusetts for the principle upon which they are supported; to Ireland for the best series of common school books extant; and to Germany for our system of Normal School training. All, however, are so blended and modified, to suit the circumstances of the country, that they are no longer exotics, but "racy of the soil."

The municipal institutions of the country being more completely developed than any other in the world, the local machinery of our Common School system forms an admirable counterpart to them, in its fullness of outline and detail.

Each city, town, township, and village has its own municipal council; while each city, town, village, and school section has equally its own independent school organization; each possessed of extensive corporate powers. One is supreme in civic affairs, while the other is not less so in all matters pertaining to the schools. The one accepts, on behalf of the whole people, the Legislative School Grant, and imposes an assessment, equivalent to the amount granted, while the other imposes any additional assessment required, and controls the entire expenditure of the school moneys, establishes libraries, and promotes the general interests of the schools.

In Upper Canada, we have forty-two counties, five cities, twenty-two towns, sixteen villages, and four hundred townships, or about five hundred municipalities. We have also the same number of city, town, and village school corporations, together with three thousand three hundred school corporations in the rural school sections, and seventy Grammar School Boards. The schools are inspected at least twice a year by Local Superintendents, appointed by the county councils; or, in the cities, towns, and villages, by the boards of trustees. The Inspectors of Grammar Schools are appointed by a central provincial authority. Each Local Superintendent is required to deliver a school lecture at least once a year, in addition to his other duties.

Besides, in addition to the judges, magistrates, and other persons specially named, each clergyman or minister, of the different religious persuasions in the country, is officially authorized to visit the schools, and aid with his counsel and advice in promoting the great objects of education.

In each county there is also a Board of Public Instruction, for the examination and licensing of teachers, composed of Local Superintendents and of the Trustees of county Grammar Schools.

As a central authority, we have at the head of the whole system a Council of Public Instruction and a Chief Superintendent of Schools —both appointed by the Crown. The Council has the entire control of the Normal and Model School—an institution established in Toronto, in 1847, for the education and training of Common School teachers. The Council also prescribes the text-books for the schools, the reading books for the public school libraries, and the Rules and Regulations for the government of the Common and Grammar Schools, the examination of Common School teachers, and for the management of the public school libraries.

The Chief Superintendent of Schools, as his name indicates, is the chief executive officer appointed to administer the public school

system. He is *ex officio* a member of the Council of Public Instruction, has the general superintendence of the Normal School, and prepares all the general regulations and reports relating to the schools, etc.

Such are the distinctive features of our system of Public Instruction in Upper Canada. In two or three particulars it differs essentially from any system in the United States; it may therefore be proper to refer to these peculiarities in detail.

1. Its Chief Executive is a non-political and permanent officer.

The success and efficiency of the system is never systematically risked at the polls or ballot box, "where sound judgment and thoughtful counsels do not always preside; although the greatest care is taken to administer the system in accordance with the well-understood wishes of the people." In fact, with the truest appreciation of the great and fundamental objects of a system of Christian and national education, designed to affect every grade of society alike, the Legislature have never yet permitted it to degenerate into a symbol of strife, or to be the subject of partisan warfare. So noble an instinct is worthy of a truly great people, and should be permanently recorded to their honor.

The principles upon which our system is founded having been more than once affirmed and sustained by the electors of the Province, it has not been considered sound policy, to subject so vital an interest and so sacred a cause to the caprice of the ever-varying current of political strife, unless its very existence were imperiled by rude and unpatriotic hands. Besides, all history has shown that no great public concern, involving the highest destiny of a nation, and beset with difficulties requiring patient and delicate treatment, can ever be brought to a successful issue, where the master mind directing it is liable to change at every adverse breath of public opinion. The renowned Michael Angelo alone perfected the colossal proportions of St. Peter's, and the genius of Sir Christopher Wren alone sketched the noble structure of St. Paul's. Even in the political history of the United States, the great principle here stated receives a striking illustration. The founders of the federal constitution, knowing that the spirit of their own heroic times could not always remain, to guard their national liberties, chose out their wisest master builders; and when the edifice was reared, they enacted that their own impress should remain upon it forever, or be changed only by the two-thirds vote of a mighty nation. It is true that the permanent efficiency of our educational system is not held to be of so much importance, as is the preservation of our political liberties; but how little is it practically considered, that to that

efficiency alone, aided by the influence of the Gospel, are we indebted, under Providence, for the very existence of the civil and religious freedom which we enjoy!

As a people, we have held that, after certain great principles have been once settled, it is but sound national policy to intrust to some enlightened and responsible person, within certain restrictions, the important duty of perfecting and keeping in continuous and active operation a system of public instruction. These systems are not built up in a day, any more than was the "Eternal City" on the seven hills. And the history of our present educational structure confirms this truth; for with all the continuous aid which the Legislature has been able to give, and the public to receive and appropriate, it has taken ten years, under one guiding hand, to bring our system of public instruction through the first stage of its existence.

The system is now young and vigorous, and endowed with capabilities and resources which are rarely combined in any other state-system of education; but had we adopted the course pursued elsewhere, we feel that we should have been dooming ourselves to continued educational infancy; and our schools would have been the subject of endless experiment and theory, without the guidance of that settled and permanent policy which alone can develop and mature a great and noble system.

2. Our next essential difference arises from the entire voluntary character of our system of public instruction. Not a penny of tax is imposed by the state for the support of the schools, nor is the law compulsory upon a single municipality of the Province. It simply offers public aid on condition that an equal amount be raised from local sources, and that the conditions annexed to the grant be complied with. Thus every county of the Province is left to exercise its own discretion, as to whether it will accept the terms offered by the Legislature, or not. With a singular unanimity, every county of the Province has accepted those terms, and but two minor municipalities have declined them; still, no penalty attaches to such a step, except the loss of the grant, which would otherwise be received. The question, then, of free schools, or of no schools, is left, where it properly belongs, to the patriotism and good sense of the people themselves. They then feel that the entire responsibility of the question rests with them, and they have the sole authority to decide it. Thus their self-respect and dignity is preserved, while the result has been most gratifying to every true friend of local self-government and popular enlightenment.

3. Our third essential difference will be found in the following extract from our school law: "And be it enacted, that no foreign

books in the English branches of education shall be used in any Model or Common School, without the express permission of the Council of Public Instruction." This effectually relieves our system of that greatest of all hindrances to its efficiency, which arises from the use of an endless variety of text-books in the schools, and which renders any uniform standard of classification impossible.

It is certain that on no light grounds should such power be reserved to the state; but, like some of those invaluable safeguards, which must be thrown around even the most equitable and evenly balanced systems of government, it was found to be absolutely necessary to impose this salutary restriction on the eccentric tastes, or mere caprice, which governed parties in the selection of text-books. Besides, although it was admitted, that isolated text-books might be found, possessed of many excellencies, still, even such books, constructed as they were without any connection or uniformity of design, were felt to be serious hindrances, rather than helps, in the process of instruction, as the intermediate steps, or links of a complete series, were entirely wanting, or but imperfectly supplied. The question was therefore reduced to the simple one, Whether we should have an uniform series of books, constructed with a view to unity of purpose, and leading, in complete and easy steps, from the mere elements of knowledge to the higher branches of learning, or whether we should be condemned to gather instruction from a confused variety of doubtful books, in each of which the same ground might have to be gone over again, and all compiled without a plan, or without the slightest connection, the one with the other? The wiser course was therefore adopted, and an uniform series of text-books, based upon an intelligent system of classification, was adopted and recommended for general use in the schools. Not a single book in use was proscribed; but by providing a better and cheaper description of text-books, the old ones gradually disappeared from the schools, and were replaced by those recommended. The result has justified what was at first felt to be a delicate experiment, though, after all, an imperative necessity; and the Irish national series of text-books is now universally used, throughout the Province, at a cost far below what had hitherto been paid for a heterogeneous variety of inferior books, incapable alike of classification or of limitation in numbers, even in the same school.

4. Intimately connected with the foregoing, is the manner in which library books have been selected for the public schools. To the same central authority is intrusted the difficult and delicate duty of recommending suitable reading books for the public school libraries. The reasons for this course, although identical in some re-

spects with those which apply to the selection of text-books, are nevertheless essentially different in their character. They were chiefly to prevent the introduction, by skillful venders, or from other sources, of unsuitable, immoral, or irreligious books. The selection made by provincial authority amounts to about eight thousand volumes, and embraces works in every department of human knowledge and learning, including works on Christian Evidence and Natural Theology. From this extensive list, the local authorities are at liberty to make the freest selection; while new works of value or interest are constantly being added to the list.

5. Our fifth peculiarity relates to the facilities provided by the Educational Department for supplying the public schools with library books, and with maps, charts, diagrams, and apparatus.

Not content with merely authorizing the use of certain books and apparatus, the Department has undertaken to supply the schools of the Province directly, from its own depositories, with all these valuable requisites. To aid us in performing this duty most effectively and advantageously, the Legislature has, with most enlightened liberality, granted thirty-six thousand dollars a year, to be expended in supplying the schools with library books, maps, and apparatus, and other essential adjuncts to their efficiency and success. The principle upon which this fund is distributed is a just and liberal one. It is, that whenever a school or municipal corporation shall contribute a sum of money for the purchase of library books, etc., at the Educational Depository, the Department will also contribute an equal amount, and supply the parties applying with articles to the value of the sum thus augmented. A premium is thus held out for exertion and liberality, and each locality is aided according to its works, and not arbitrarily, whether such aid is required or not; and all are encouraged to contribute, to the utmost of their ability, to promote the efficiency of the schools.

Thus, in a deep and expanding volume, is permitted to flow freely and continuously, into every part of the Province, ample streams of knowledge and springs of intellectual life, purified alike from every poisonous influence and noxious element.

6. The principle involved in our sixth and last peculiarity is a new one, in its application, even to our own school system. It is that of pensioning the worn-out teachers of the Province.

It has long been maintained, and with justice, that the profession of teaching has been one of the most laborious, but ill-requited professions in the world; that while to it we owe our very superiority as an intelligent people, with the most heartless indifference and ingratitude we invariably spurn or neglect the hand that early sup-

plied us with our intellectual food, and leave its possessor to pine and die in solitude and want. Upper Canada, I rejoice to say, has nobly removed this stigma upon her character. She has extended her generous sympathy and aid to a most deserving class of men—men, too, who, amid discouragements and privations doubly endured in a new country, devoted themselves to the public service, when the very existence of a public system of education itself was imperiled, or languished for want of legislative aid and recognition.*

I can scarcely leave this part of my sketch without quoting one paragraph, illustrative of the religious character of our school system, from the speech of the Earl of Elgin, in 1851, on the occasion of his laying the corner-stone of the spacious and commodious building devoted to the purpose of the Normal School and the Department of Public Instruction for Upper Canada—"the seed-plot of the system," as he graphically styles it. At the same time, I can not but refer to the enlightened devotion, ever exhibited by Lord Elgin to the cause of popular education in Canada, during the seven years in which he so ably administered the government of British North America. As an eloquent and accomplished statesman, he has stood out alone among the many distinguished men who have occupied the high position of Her Majesty's representative in Canada; and it must ever be a source of satisfaction to himself, and of pride and pleasure to Canadians, to reflect that he alone, as a Governor-General, identified himself personally, as well as officially, throughout his whole administration, with the general education of the people of Canada. He has now retired from the scenes of his important labors, but the best wishes of Canada will ever follow him. Speaking on the occasion referred to, in reply to the Chief Superintendent of Schools, who had presented to him an address, Lord Elgin impressively remarked:

> Sir, I understand from your statements—and I come to the same conclusion from my own investigation and observation—that it is the principle of our Common School educational system, that its foundation is laid deep in the firm rock of our common Christianity. I understand, sir, that while the varying views and opinions of a mixed religious society are scrupulously respected—while every semblance of dictation is carefully avoided—it is desired, it is earnestly recommended, it is confidently expected and hoped, that every child who attends our Common Schools, shall learn there, that he is a being who has an interest in eternity as well as in time—that he has a Father, toward whom he stands in a closer, and more affecting, and more endearing relationship than to any earthly father, and that Father is in heaven; that he has a hope, far transcending every earthly hope—a hope full of immortality; that he has a

* The average age of the seventy-five teachers already placed on this fund is sixty-five years, and their average length of public service as teachers twenty-three years.

duty—the duty of striving to prove, by his life and conversation, the sincerity of his prayer, that that Father's will may be done upon earth as it is done in heaven. I understand, sir, that upon this broad and solid platform, which is raised upon that good foundation, we invite the ministers of religion, of all denominations—the *de facto* spiritual guides of the people of the country—to take their stand along with us. That, so far from hampering or impeding them in the exercise of their sacred functions, we ask, and we beg them, to take the children—the lambs of the flock, which are committed to their care—aside, and to lead them to those pastures and streams, where they will find, as they believe it, the food of life and the waters of consolation.

In conclusion, it remains for me to give a summary statement of the progress of education in Upper Canada.

As has been already intimated, the sum first granted by legislative authority for Common Schools in Upper Canada amounted to twenty-four thousand dollars. This sum was afterward reduced to ten thousand dollars per annum. In 1841, however, when the foundations of our present system were laid, the noble sum of two hundred thousand dollars was granted to carry it into effect in the entire Province—eighty thousand to Upper Canada, and a hundred and twenty thousand dollars to Lower Canada. In 1842, this sum was again divided, and eighty-four thousand dollars were allotted to Upper Canada, and one hundred and sixteen thousand to Lower Canada. By the last census, taken in 1852, it was found that Upper Canada had so far surpassed Lower Canada in population, on which the division of the grant was based, that one hundred and three thousand dollars were appropriated to Upper Canada, and ninety-seven thousand to Lower Canada. An additional grant having been since made to the entire Province, the share coming to Upper Canada amounted to one hundred and fifty-five thousand dollars, and one hundred and forty-five thousand dollars to Lower Canada.

In addition to this appropriation, about thirty thousand dollars are also granted annually for Grammar Schools in Upper Canada; total, one hundred and eighty-five thousand dollars for all the public schools, etc., in connection with the Department. Of this total sum, about one hundred thousand dollars are annually appropriated to the Common Schools; thirty-six thousand dollars for libraries, maps, and apparatus; one hundred and twenty thousand dollars for the Normal and Model Schools; thirty thousand dollars for the Grammar Schools; four thousand dollars for the support of superannuated Common School teachers; and three thousand dollars for miscellaneous purposes, including the publication of a Journal of Education, which is sent to every school officer.

Thus has the liberality of the Legislature kept pace with the

growth and prosperity of the Province, and thus has the most ample provision been made for the promotion of every department of the great work of popular education in Upper Canada.

As we have hitherto referred only to what has been done by the Government and Legislature, for the promotion of popular education, we now turn to consider the corresponding exertions of the people themselves.

In 1842, after the passage of the act of 1841, we find that one thousand seven hundred and twenty-one Common Schools had been established. The number has now increased to three thousand two hundred and forty-four, or nearly one hundred per cent. in twelve years; while the Grammar Schools have increased from eight, in 1807, to eighty, in 1854; total, three thousand three hundred and twenty-four, or one public school for every three thousand inhabitants. The school population, between the ages of five and sixteen years, has increased from one hundred and forty thousand in 1842, to two hundred and eighty thousand in 1854, or one hundred per cent. The attendance of pupils, at the Common Schools, has increased from sixty-six thousand in 1842, to two hundred and four thousand in 1854, or more than three hundred per cent.; and at the Grammar Schools, from one thousand in 1847, to four thousand two hundred and eighty-seven in 1854, or more than four hundred per cent.—a most gratifying increase, certainly, and one that indicates strongly the increased anxiety of the public to avail themselves of the largely increased facilities of instruction afforded by these colleges of the people.

The greatest test, however, of the love of the Canadians for these institutions, is indicated by the amount which they contribute for their support. In 1842, the total sum raised by assessments, rate-bills, and subscriptions, independent of the Legislative Grant, amounted to eighty thousand dollars; in 1850, to two hundred and fifty thousand dollars; and, in 1854, to upward of half a million of dollars. The total expenditure, therefore, for the salaries of Common School teachers alone, in 1842, amounted to one hundred and sixty-six thousand dollars, in 1850 to three hundred and fifty thousand dollars, and, in 1854, to six hundred and seven thousand dollars. In addition to this sum, about three hundred thousand dollars were expended in 1854, in support of the colleges, grammar schools, libraries, school-houses, maps, and apparatus, being a gross sum of about a million of dollars, for primary, intermediate, and superior or collegiate institutions, or at the rate of one dollar for each inhabitant of Upper Canada. There are five colleges in Upper Canada possessed of university powers, and four which are

either high schools or theological seminaries, and are without these powers.

To institute any educational comparison between Upper Canada and any of the United States, it is best to take the basis of population, as the test of comparison. The population of Upper Canada is about a million; that of Maine about one half; Massachusetts is equal to it; Pennsylvania double, and New York quadruple. The comparative attendance of pupils, in Canada, New York, and Massachusetts is about equal, but Maine and Pennsylvania are slightly in advance. A recent publication gives the following interesting comparative Table.

The Number of Scholars to whole Population.		Proportion of Scholars to Children of School Age.	
In Upper Canada	23 per cent.		76 per cent.
" Lower Canada	8 "		43 "
" The State of Maine	33 "		93 "
" The United States	20 "		66 "

The following Table shows the comparative state of education in America and Europe, and is compiled from the latest returns.

States.	One Scholar to	States.	One Scholar to
Maine	3.1 persons.	Belgium	8.3 persons.
Upper Canada,	4.4 "	France	10.5 "
Denmark	4.6 "	Lower Canada	12.5 "
United States	4.9 "	Austria	13.7 "
" (incl. slaves).	5.6 "	Holland	14.3 "
Sweden	5.6 "	Ireland	14.5 "
Saxony	6.0 "	Greece	18.0 "
Prussia	6.2 "	Russia	50.0 "
Great Britain	7.5 "	Spain	65.0 "
" act. at school.	7.0 "	Portugal	81.7 "
Norway	7.0 "		

The comparisons, in the above instances, are to the total population, and the results are sufficiently remarkable; they place Maine and Upper Canada at the head of educated states, and America before any state of Europe.

Our Library system having been only put into operation in 1853, we can only report the result of about two years' efforts of the Department, to supply the public with suitable reading books for the winter evenings. During that time, however, we have dispatched, from the Depository, at Toronto, about one hundred and ten thousand volumes, and these have gone into almost every part of Upper Canada, conveying light and intelligence into many a settler's dwelling.

Having thus but imperfectly sketched the history, state, and pro-

gress of popular education in Upper Canada, from its earliest dawn in 1789, to the close of 1854, I can only, from the past, point to the future. With all its solemn grandeur and mystery it lies before us; but who can lift the vail that shrouds it? As our experience is only comparative, and is founded alone upon the past, so our hopes and anticipations of the future alone brighten when the halo of the past is reflected upon them.

We may glance along the history of nations and survey with a thoughtful eye the mighty contests, the civil commotions, and the fearful up-heavings which have rent them asunder and have destroyed their power—forever. We can even contemplate their intellectual achievements and their unrivaled skill in the arts, but we look in vain for a parallel to our own times. Here a new spirit stands before us. As if tired of the spirit of war, the lust of conquest, or the stately pomp of courts, we see each nation putting forth all her energy and strength to uplift the masses of people to the dignity of the Christian citizen. Schools are multiplied; the abstruse sciences of the alchemists, of the days of chivalry, are unfolded even to the capacities of the child; the Bible is circulated in every land, and in every tongue, and the profoundest intellect of the day is engaged in rendering attractive the hitherto sealed book of popular instruction and enlightenment. But who, from such a stand-point, ever caught a glimpse of the distant goal before us? or who, from so brilliant a past, has ever gazed upon its corresponding future? Not one. Down the vista of history, we have seen the rise and fall of nations, the beginning and ending of wars, the failures and the perfection of art, but the end of that mighty contest of light against darkness, that great experiment of the age in which we live, we have never yet witnessed. Nor shall we. On us, as nations, and on us as individuals, devolves, however, the solemn responsibility of guiding, directing, and counseling (each in the sphere in which Providence has placed him) in the great work in which we are all engaged—fervently imploring that wisdom, and counsel, and might be imparted to the nations promoting so momentous an interest of the common weal, and that the blessing of Almighty God would abundantly rest upon the exertions of all Christian men engaged in the same noble labor of love.

VII. BENEFACTORS OF EDUCATION, LITERATURE, AND SCIENCE.

In gathering up the material for a History of Education, Literature, and Science, in this country, we have been deeply impressed with the number and value of the donations and bequests which have already been made by individuals in different states, to build, furnish, and maintain libraries, schools, colleges, and scientific institutions. A part from the annual appropriation of a portion of the public revenues in some of the states and cities to educational purposes—mainly of an elementary popular character, and the truly munificent endowment of schools, academies, and universities, in the new States, by the donations of large tracts of the public domain for these purposes, by the General Government,* and for the right use of which posterity will hold the present generation of legislators in those States to a solemn reckoning—the great work of building up institutions for the increase and diffusion of knowledge, especially in its higher departments, has been done by individual beneficence. It is a fortunate omen

* "It has" says Chancellor Kent, "been uniformly a part of the land system of the United States to provide for public schools. The Articles of Confederation, 1787, the acts admitting into the Union Ohio, Indiana, Illinois, Missouri, Louisiana, Florida, Arkansas, &c., all provided for the appropriation of lands in each township for the use of public schools. The elevated policy of the federal government as one of our statesmen has observed, was a noble and beautiful idea of providing wise institutions for the unborn millions of the west, of anticipating their good by a sort of parental providence, and of associating together the social and the territorial developement of the people, by incorporating these provisions with the land titles derived from the public domain."

The following Table, from DeBow's Compendium of the Seventh Census gives the *Whole amount of Lands appropriated by the Federal Government for Educational Purposes, to 1st of January*, 1854.

States and Territories.	For Schools.	For Universities.	States and Territories.	For Schools.	For Universities.
Ohio,	704,488	23,040	Iowa,	905,144	46,080
Indiana,	650,317	23,040	Wisconsin,	958,548	46,080
Illinois,	978,755	23,040	California,	6,719,324	46,080
Missouri,	1,199,139	23,040	Tennessee,	.....	†3,553,824
Alabama,	902,774	23,040	Territories. Minnesota,	5,069,234	.....
Mississippi,	837,584	23,040	Territories. Oregon,‡	12,140,907	46,080
Louisiana,	796,044	46,080	Territories. New Mexico,	7,493,120	.....
Michigan,	1,067,397	46,080	Territories. Utah,	6,681,707	.....
Arkansas,	895,460	46,080	Total acres,	48,909,535	4,060,704
Florida,	908,503	46,080			

† The vacant lands in Tennessee, amounting to 3,553,824 acres, were granted to the State provided $40,000 of the proceeds, if they amount to so much, be applied to establish and support a college.

‡ Donations not yet reported.

of a still brighter future, that from small beginnings in the days of our poverty—from gifts of nails, glass, and timber—of a few books, a few acres of wild land, and a few pounds in money, we now hear and read of donations and bequests which are reckoned by thousands and hundreds of thousands of dollars, flowing out of the abundance of rapidly accumulated fortunes. Men of ample means begin to feel the luxury of doing good, and to see that a wise endowment for the relief of suffering, the diffusion of knowledge, the discovery of the laws of nature, the application of the principles of science to the useful arts, the conservation of good morals, and the spread of religious truth, is in the best sense of the term, a good investment—an investment productive of the greatest amount of the highest good both to the donor and his posterity, and which makes the residue of the property from which it is taken, both more secure and more valuable.

To the continued and increased liberality of men of large means, either in their associated or individual action, must we depend for the multiplication and still larger developement of our literary, scientific, and educational institutions. We cannot look to any central government, or 'patriarchal despotisms,' even if they could exist here, to promote the numerous local institutions of this character, which this age and country of large cities require. And even if we had a government fitted and disposed to establish such institutions, the evils connected with their management by officials, appointed more from considerations of party success and service, than of personal fitness, would defeat or limit the good these institutions would otherwise accomplish. Whatever the government can do, had better be done through voluntary and incorporated associations, aided by individual subscriptions and bequests, and responsible, by periodical inspection and printed reports, to the state and public opinion.

Let us then, honor in every fit way, men who appropriate a portion of their wealth to the endowment of charitable and educational foundations. By every form of publicity, let us protect their trusts from such abuses, as the recent "Inquiries of Parliamentary Commissions" have exposed in the Educational Charities of Great Britain.

In dwelling, as we propose to do, in successive numbers, on the Lives and Character of several of the most munificent benefactors of Education, Literature, and Science, and describing the growth and present condition of the Institutions which their large or well timed acts of liberality have created and endowed, we shall not lose sight of the names and services of another class of benefactors, whose contributions, although relatively small, were large in proportion to the resources from which they were drawn, and, from the time and

exigences when they were made, were decisive not only of the increased usefulness, but of the very existence of the institutions. In bestowing our praises on Abbott Lawrence for the gift and bequest of $100,000 for the foundation and endowment of the Scientific School at Cambridge, we must not diminish our gratitude to John Harvard, whose early bequest of £750 converted a Grammar School of precarious prospects, into the first permanent College of America. While we express our admiration at the prospective development of the educational resources of Union College, when in the full enjoyment of the trust fund of $600,000, given by Eliphalet Nott, we shall not withhold our deepest reverence from the eleven ministers who met at Branford, in 1700, in faith and prayer, to deposit, each, some books from his own library, to found a College in Connecticut. In recording with deserved commendation the gift of $500,000, by James Smithson, to establish an Institution in Washington, for the increase, and diffusion of knowledge among men; of $400,000 by John Jacob Astor for a Library of Reference in the city of New York; of $300,000, by Peter Cooper, to erect and endow an Institute of Popular Education in the same city; of $50,000 by Joshua Bates, to the city of Boston by which the plan of a Free City Library was made secure, and broadly and immediately beneficial; of $250,000 by John Lowell, Jr., by which the Free Public Lecture was raised into an Institution; and other similar gifts and donors; we will not forget such men as Caleb Bingham, who by the gift of one hundred and fifty volumes of books to the Town of Salisbury, in Connecticut, founded the first Youths Library in this country; such men as Josiah Holbrook, who popularized the Scientific Lecture; or James Wadsworth, of Geneseo, who by spending time and money secured the establishment of a Free Library in every one of the 11,000 School Districts of New York; or Edmund Dwight, of Boston, who by his timely donation of $10,000, induced the Legislature of Massachusetts, to provide facilities for the professional training of teachers for her common schools, and thus, inaugurated a new educational policy in our land.

VII. ABBOTT LAWRENCE.

Abbott Lawrence, the founder of the Scientific School at Cambridge, which bears his name, was born at Groton, Massachusetts, on the 16th December, 1792—the fifth son of Samuel and Susana [Parker] Lawrence.* To the endowment of a bright, active mind and sanguine happy temperament, was added only the hardy and wholesome discipline of a pious New England country household,—and the meagre attainments of a District School, with the higher advantages for a few months of an Academy in his native village, up to the age of sixteen years, when he entered Boston, "a poor lad with a bundle under his arm, and with less than three dollars in his pocket, his whole fortune," to serve his apprenticeship as clerk in the importing house of his brother Amos Lawrence. From such beginnings, and without the aid of family connection and wealth, by the steady exercise of the homely and practical virtues of integrity, industry, courage, promptitude, public spirit, philanthropy, and perseverance, he attained a commercial, political, and social eminence, not surpassed by any citizen of Boston at the time of his decease. For years even before his death—one† who is a Bostonian in every fibre of his being, with a patriotism large enough to embrace the whole country, remarked in the language of Edmund Burke, "When an act of great and signal humanity was to be done, and done with all the weight and authority that belonged to it, this community could cast its eyes on none but him."

On the 1st of January, 1814, he was taken by his brother Amos, into partnership, and together, under the firm of A. & A. Lawrence—these two brothers, entered on a career of large commercial transactions—first in the foreign, but afterward in domestic trade—and finally of great manufacturing operations, by which, while they amassed great estates for themselves, and helped to develope the resources and material prosperity of their city, state, and country—they at the same time gave beautiful exhibitions of the true uses of wealth in relieving

* A brief notice of the family of Samuel Lawrence, will be given in a sketch of Amos Lawrence—the fourth son, in connection with a History of Williams College, and Lawrence Academy, of which institutions he was a liberal benefactor. The life of this truly good man, and noble hearted merchant, published by Gould & Lincoln, Boston, should be placed in every School Library, and be read by every young man in the country.

† Hon. Robert C. Winthrop, in an Address at a Public Meeting in Faneuil Hall, on the occasion of the death of Abbott Lawrence, on the 20th of August, 1855.

destitution and misfortune, and in ministering to the moral and intellectual advancement of society. Their success and lives have added lustre to the mercantile profession of Boston, and their names are indissolubly connected with the growth of two great cities—Lowell and Lawrence—on sites, where the land was almost useless for ordinary agricultural purposes, to a capital invested in various forms of productive industry to the value of $20,000,000, and with an aggregate population of more than forty thousand inhabitants, with homes, churches, schools, libraries, and all other aids and appliances of intelligence, independence, comfort, and virtue, such as no two manufacturing communities in the old world can show. While engaged in the vigorous prosecution of his own business, Mr. Lawrence was prompt to consider and aid, by sharing the risk, any enterprise which promised not so much great return in dividends to those immediately interested, as public utility, in which those who are most backward to help in the start, are sure to step in to reap the private emolument in the end. Many of the great railroads and other means of internal communication in and out of New England,—of national and international importance, received his prompt and liberal support.

Mr. Lawrence did not seek public life, but when he accepted an official trust, he entered upon its duties with his whole heart, whether as chairman of a political meeting, or member of a working committee; in the councils of the country, or as her representative abroad. In 1831, he was elected a member of the Common Council of Boston for one term, and in 1834, and 1839, he represented Suffolk District in the National Congress. In 1842, he was appointed one of the Commissioners on the part of Massachusetts, to settle the North Eastern Boundary question, then pending between the United States and Great Britain. In 1848, he was a prominent candidate of the Whig party for nomination to the high office of Vice President of the United States; and in 1849, was tendered the choice of one of two Secretaryships in the Cabinet of President Taylor. He accepted in the same year, the appointment of Minister Plenipotentiary to the Court of St. James. To all these positions he was promoted without any solicitation on his part, by such majorities, or under such circumstances as showed the public confidence in his integrity, ability, and patriotism. In every office, while he acted out to the full circumference of his duty, and to the fullest realization of public confidence and anticipation, he at the same time used the influence of his wealth and position to minister in large measure to the social and individual happiness of his townsmen and countrymen. The credit of American skill and industry in the Great London Exhibition of

1851, was saved from public disgrace, and a large number of American inventors, mechanics, manufacturers, from sore disappointment, by the prompt and liberal advances of Mr. Lawrence, and Mr. George Peabody, another noble specimen of the American merchant.

Mr. Lawrence died in his own home in Boston, on the 18th of Aug., 1855, and was buried on the 22d, in the Rural Cemetery of Mount Auburn, that quiet and attractive Garden of Graves, which his liberality and public spirit had helped to create and adorn. His last illness, death, and burial were attended with such demonstrations of wide spread and deep-felt sorrow and respect as only a lively sense of his great private virtues, and public services could inspire, and which are seldom accorded even to one, holding the highest official station, cut down in the midst of public duties and relations. His illness with its varying aspects from day to day, was announced by telegraph and the press, as foreshadowing a great loss, not only to the mercantile profession, but to the whole country. The tidings of his death called forth resolutions of sympathy and gratitude from the many Charitable and Literary Associations of which he was a member and a benefactor;—and old Faneuil Hall, in which he had presided over many large assemblies of his fellow-citizens, was crowded on the 20th by representatives of every profession and pursuit, and every public institution of education and beneficence, to join in resolutions and addresses expressive of the common bereavement. On the 22d, when he was borne from his own home to the Brattle Square Church, of which he was a communicant, and regular worshipper,—the great men and all classes of the community—college professors and mechanics, judges and merchants, statesmen and divines, rich men and poor, flocked together to mingle their common grief over the coffin of a common friend. After solemn and appropriate religious observances, conducted by the pastor, the Rev. Dr. Lothrop, the procession moved away through the streets of the city, which he loved so well, under a military escort, and with minute guns firing.

From the many addresses and notices which his death called forth, we select a large portion of that made by the Hon. Edward Everett in Faneuil Hall, as presenting a just estimate of the public services and private virtues of Mr. Lawrence, drawn by one "who having walked side by side with him for forty years, and acted with him confidentially on many important occasions public and private, enjoyed ample opportunities to witness the great and excellent qualities which made him so respected and valued a member of the community."

"It would be an unseasonable and superfluous, though a grateful task, before this assembly,—composed of the neighbors, the associates, the fellow-citizens of our deceased friend,—to attempt minutely to relate his career or delineate his character.

You are acquainted with them from personal observation, and they have already gone forth, on the wings of the press, to the four quarters of the land. You have been accustomed to hold them up and to speak of them as a most happy specimen of the life and qualities, which, without early advantages over the rest of the community, are naturally produced by that equality of condition which prevails in New England, and by those means of common school education, and the facilities which attend a virtuous, energetic and industrious young man upon his entrance on the world. You habitually point to him, as a bright example of the highest social position, of commanding influence over others, of overflowing abundance of this world's goods, attained by the calm and steady exercise of home-bred virtues and practical qualities, by the energetic and unostentatious pursuit of an industrious career, which are the common birth-right of the country, and the greater his praise, who out of these familiar elements of prosperity was able to rear such a rare and noble fabric of success.

Mr. Lawrence, Sir, as you well know, belonged to that class of merchants, who raise commerce far above the level of the selfish pursuit of private gain. He contemplated it as a great calling of humanity, having high duties and generous aims; one of the noblest developments of our modern civilization. I know these were his views. I had a conversation with him many years ago, which I shall never forget. I was to deliver an address before one of our local associations, and I went to him and asked him what I should say to the young men. "Tell them," said he, "that commerce is not a mercenary pursuit, but an honorable calling. Tell them that the hand of God has spread out these mighty oceans, not to separate but to unite the nations of the earth; that the winds that fill the sail are the breath of Heaven; that the various climates of the earth and their different products are designed by Providence to be the foundation of a mutually beneficial intercourse between distant regions." Mr. Lawrence was justly proud of the character of a Boston merchant, and that character suffered nothing at his hands. His business life extended over two or three of those terrible convulsions, which shake the pillars of the commercial world, but they disturbed in no degree the solid foundations of his prosperity. He built upon the adamantine basis of Probity; beyond reproach, beyond suspicion. His life gave a lofty meaning to the familiar line, and you felt, in his presence, that

"An honest man is the noblest work of God."

Although in early life brought up in a limited sphere, and in the strictness of the old school, which prescribed a somewhat rigid perseverance in one track, Mr. Lawrence was not afraid of bold and novel projects; he rather liked them. He was an early and an efficient friend of the two great business conceptions—creations I may call them—of his day and generation. As much as any one man, more than most, he contributed to realize them, to the inappreciable benefit of the country. When he came forward into life, India cottons, of a coarser and flimsier texture than any thing that has ever been seen in this country by any man under thirty-five years of age, were sold in this market at retail for a quarter of a dollar a yard. Every attempt to manufacture a better article was crushed by foreign competition, acting upon imperfect machinery, want of skill incident to a novel enterprise, and the reluctance of capital to seek new and experimental investments. Mr. Lawrence felt that this was an unnatural state of things. He believed, if our infant arts could be sustained through the first difficulties, that they would assuredly prosper. He believed the American Union to be eminently calculated for a comprehensive manufacturing system. He saw, in no distant perspective, the great agricultural staple of the South enjoying the advantage of a second, and that a home market, by being brought into connection with the mechanical skill and the capital of the North. He saw the vast benefit of multiplying the pursuits of a community, and thus giving play to the infinite variety of native talent. He heard in advance the voice of a hundred streams, now running to waste over barren rocks, but destined hereafter to be brought into accord with the music of the water-wheel and the power-loom. He contemplated a home consumption at the farmer's door, for the products of his corn-field, his vegetable garden, and his dairy. These were the views which led Mr. Patrick J. Jackson, Mr. F. C. Lowell, and Mr. Nathan Appleton and their associates, to labor for the establishment of the manufactures of the United States. These surely were large

and generous views. At the time when his own pursuits and interests were deeply engaged in commerce, entertaining the opinions I have so briefly indicated, he threw himself with characteristic ardor into the new pursuit, and the country is largely indebted to Mr. Lawrence for the noble result. We are now, without any diminution of our agriculture and navigation, but on the contrary with a large increase of both, the second manufacturing country in the world. The rising city which bears his name, on the beautiful banks of the Merrimack, will carry down to posterity no unworthy memorial of his participation in this auspicious work.

The other great conception, or creation, to which I had reference was the railroad system of the country. For this also the community is largely indebted to Mr. Lawrence. With respect to the first considerable work of this kind in New England, the Worcester Railroad, I cannot speak with so much confidence, but with regard to the extension of that road westward, I am able to speak from my own information. Mr. Lawrence was one of its earliest and most efficient friends. It is twenty years ago this summer since we had a most enthusiastic and successful meeting in this hall in furtherance of that great enterprise. Mr. Lawrence contributed efficiently to get up that meeting, and took a very active part in the measures proposed by it. It was my fortune to take some part in the proceedings. At the end of my speech, for which he had furnished me valuable materials and suggestions, he said to me, with that beaming smile which we all remember so well, "Mr. Everett, we shall live to see the banks of the Upper Mississippi connected with iron bands with State street." He has passed away too soon for all but his own pure fame; but he lived to see that prophecy fulfilled. I need not tell you, Mr. Chairman, that to these two causes—the manufactures and the net of railroads strewn over the country, New England is greatly indebted for her present prosperity.

There is another cause to which she owes still more, than to any thing that begins and ends in material influences; the cause of Education. Of this also, Mr. Lawrence was an efficient friend. Besides all that he did for the academies and schools of the country, in answer to applications for aid continually made, and as constantly granted in proportion to their merits, he has left that enduring monument of his enlightened liberality, the Scientific School at Cambridge. My friend and former associate in the Corporation of Harvard College (Hon. S. A. Eliot,) can vouch for the accuracy of what I say on this head. Mr. Lawrence felt that our collegiate seminaries, from the nature of those institutions, made but inadequate provision for scientific education as a preparation for the industrial career. He determined, as far as possible, to remedy the defect. He had felt himself the want of superior education, and resolved, that, as far as he was able to prevent it, the rising generation of his young countrymen should not suffer the same privation. I had the honor, at that time, to be connected with the University at Cambridge. I conferred with him on this subject from the time when it first assumed distinct shape in his mind, to that of its full development. He saw the necessity of systematic training in the principles of science, in order to meet the growing demands of the country and the age. He saw that it was a period of intense action. He wished our agriculturists, our engineers, our chemists, our architects, our miners, our machinists,—in a word all classes engaged in handling the natural elements, to lay a solid foundation on the eternal basis of science. But his views were not limited to a narrow utilitarianism. He knew the priceless worth of pure truth. He wished that his endowment should contribute to promote its discovery by original researches into the mysteries of nature, and he especially rejoiced in being able to engage for his infant establishment the services of the great naturalist* of the day. These were the objects of the scientific school,—this the manner in which he labored for their promotion. What nobler object for the appropriation of the fruit of his hardly earned affluence could be devised? For material prosperity and all the establishments by which it is augmented and secured may flee away; commerce may pass into new channels; populous cities in the lapse of ages may be destroyed; and strong governments be overturned in the convulsion of empires; but science and truth are as eternal as the Heavens, and the memory of him who has contributed to their discovery or diffusion, shall abide till the Heavens themselves have departed as a scroll.

In these and other ways, of which I have not time to speak, Mr. Lawrence ren-

* Professor Louis Agassiz.

dered noble service to the community, but always as a private man. He wished to serve it in no other capacity. He resisted, as much as possible, all solicitations to enter public life. He served a little while in our municipal councils and our State Legislature, but escaped as soon as possible. He served two terms in Congress, with honor and good repute. He brought to that market articles with which it is not overstocked; sound, reliable, practical knowledge, and freedom from electioneering projects. He rendered the most important aid as one of the commissioners on behalf of Massachusetts, in the negociation of the North Eastern Boundary question. He was offered a seat in General Taylor's Cabinet, which was promptly declined; and, when the mission to London was placed at his disposal, he held it long under advisement. While he was deliberating whether to accept the place, he did me the honor to consult me, naturally supposing I could give him particular information as to the duties of the office; and, remarking that it would depend in a considerable degree on my report, whether he accepted it. Among many other questions, he asked me "whether there was any real foundation, in truth, for the ancient epigrammatic jest, that "an ambassador is a person sent to a foreign government to tell lies for his own," adding, that, if that was the case, his mind was made up; he had never yet told a lie, and was not going to begin at the age of fifty-six." I told him, "I could answer for myself as a foreign minister, that I had never said a word or written a line which, as far as my own character or that of my government was concerned, I should have been unwilling to see in the newspapers the next day;" and this explanation, he said, removed one of his scruples. I encouraged him, of course, to accept the mission; and his brilliant success is known to the country and to Europe; success equal to that of any of his predecessors, living or dead, however distinguished. His genial disposition, his affable manners, his princely hospitality, his appropriate speeches at public meetings and entertainments,—not studied harangues, not labored disquisitions,—but brief, animated, cordial appeals to the good feelings of the audience,—topics pertinent to the occasions,—the tone cheerful and radiant with good temper,—lively touches on the heart-strings of international sympathy,—these were the manly and honest wiles with which he won the English heart. His own government, (first duty of a foreign minister), was faithfully served. The government to which he was accredited was conciliated. The business confided to him, (and it is at all times immense), was ably transacted. The convenience of a host of traveling countrymen promoted. The public in England gratified. What more could be done or desired? His success, as I have said, was fully equal to that of any of his predecessors; perhaps I ought to use a stronger term.

He came home, and returned to private life, the same man. He resumed his place in his happy home, in his counting-house, in the circle of friends, and wherever duty was to be performed, or good done. To the sacred domain of private life I will not follow him, except to say a word on that trait of his character to which the gentlemen who have preceded me have so feelingly alluded, I mean his beneficence; a topic never to be omitted in speaking of Mr. Lawrence. And here I will say of him, what I heard President John Quincy Adams say of another merchant prince of Boston (Col. Perkins) in the Hall of the House of Representatives that "he had the fortune of a prince, and a heart as much larger than his fortune, as that was than a beggar's." I will say of him what was said of his lamented brother, Amos, that "every day of his life was a blessing to somebody." Sir, he gave constantly, by wholesale and retail; and, as I venture to affirm without certainly knowing the fact, every day of his life. His bounty sometimes descended in copious showers, and sometimes distilled in gentle dews. He gave munificent sums publicly, where it was proper to do so, by way of setting an example to others; and, far oftener, his benefactions followed humble want to her retreat, and solaced the misery known only to God and the earthly steward of his bounty. Vast sums were given by him while he lived, which evinced, but, if I mistake not, did not exhaust, his liberality.

Such he was; so kind, so noble, so complete in all that makes a MAN, and the ultimate source of all this goodness, its vital principle, that which brought all his qualities into harmonious relation, was religious principle; the faith, the hope of the gospel. This is no theme for a place like this,—other lips and another occasion will do it justice, but this it was which gave full tone to his character, and

which bore him through the last great trial. This it is which must console us under his irreparable loss, and administer comfort to those with whose sorrow the stranger intermeddleth not."

Of his many acts and bequests for educational and charitable purposes, his founding of the Scientific School at Cambridge, by the gift to Harvard College of $100,000, and his provision in his Will of $50,000, for the erection of *Comfortable Homes* for the industrious and temperate poor, are the most signal. Of the first enough has been said in general explanation,* in the remarks of Mr. Everett. Respecting the last we publish that portion of the Will, transcribed from the Probate Records of Boston, as best explaining his own object, and affording a good model for those who are disposed to go and do likewise.

Having heretofore contributed from time to time, as has seemed to me just and proper, to the various benevolent institutions and Charitable Societies of Boston, and as most of the public charities among us are now well established, and so far provided for, that their support, while properly and usefully conducted, may be safely left to a community like that of Boston, I do not now deem it necessary to make any gifts or bequests to those purposes, but prefer to direct the appropriation of that which under other circumstances I might devote to them, to another object not less important but which has not received so much of the public attention; and as it has long appeared to me that in no way could the welfare of the poor be more promoted than by providing for them honest and industrious, comfortable, and healthy habitations, at such reasonable rents as shall be within their means, and thus affording them one of the greatest safeguards of family happiness and virtue, "*A Home*," and desiring as far as in me lies to aid in this object, hoping that should the experiments lately commenced in this behalf be successful, others may be induced to join in this promotion of so desirable a purpose. I do hereby give, devise, and bequeath to my son James Lawrence, and to my friends I. Ingersoll Bowditch and George H. Kuhn, all of said Boston, or to such of them as shall accept this trust, the sum of Fifty thousand dollars, to hold the same to them the said Lawrence, Bowditch, and Kuhn, and their assigns, the survivors of them and their assigns, and the survivor of them, his heirs, executors, administrators, and assigns, but in trust nevertheless for the uses and purposes following, namely—that the said Trustees shall as soon as conveniently may be after the payment and receipt of the said sum, expend the same in the purchase of such suitable parcel or parcels of land, as they may consider best adapted to the purpose, in the City of Boston, and in the erection thereon of Model Lodging Houses for the Poor, the same to be built and arranged for the accommodation of families, with especial reference to the comfort and health of the occupants and the proper ventilation and cleanliness of their tenements; and upon the further trust to cause and permit the said houses and tenements when so erected and completed, to be let to poor, temperate, and industrious families at such reasonable rents as to the said Trustees shall seem best; and the nett yearly rents and income thereof, after deducting such sums as may be necessary for the payment of taxes, (in case taxes are assessed on the said property), and for repairs and insurance and such other reasonable expenses as may be incurred in the execution of the said trust including the compensation of such Clerk or Agent as they may require in the management of the said trust estate, to divide into two equal parts, one of which parts shall yearly and in each year be distributed by the said Trustees at their discretion, and in such proportions, as they shall decide, among the public charities of the City of Boston, incorporated or otherwise; and the other half part to invest in some safe and productive manner, and the interest and income to suffer to accumulate until it shall constitute a fund of Ten thousand dollars, to be applied when needed to the rebuilding of the said tenements or lodging-houses. Provided, however, that if by reason of the destruction or injury of the said buildings by fire or any other cause, the whole or any portion of the said reserve fund shall be required in addition to such amounts as may be received upon any policies of insurances, for the rebuilding or repair of the said tenements, before the said fund shall have amounted to the said sum of ten thousand dollars, it shall be lawful for the said Trustees to apply the same or so much as may be needed to that purpose. And whenever and as often as the said fund shall by reason of such appropriation and expenditure of the whole or a part have been reduced below the said

* For History of the Lawrence Scientific School, and the Course of Instruction established for 1855-56, see post page, 217.

sum of ten thousand dollars, the same shall be suffered to accumulate by the addition and investment of one full half part of the said nett yearly rents and income, and the interest thereon until it shall reach that sum; but whenever the same shall amount to the said sum of ten thousand dollars, then the whole of the said nett yearly rents and income, together with the interest and income of the said fund of ten thousand dollars, (until the said fund shall be wanted for the purpose of rebuilding), shall be yearly and in each year distributed among the public charities of the City of Boston as aforesaid. Provided, however, that if after the said fund of ten thousand dollars shall have been accumulated and invested in manner aforesaid, it shall in the opinion of the said Trustees, be desirable and expedient to appropriate and expend the income of the said trust fund of ten thousand dollars and the half part of the nett yearly rents and income before that time appropriated to the formation of the said fund of ten thousand dollars to the enlarging or improving of the tenements or houses then erected, they shall have the right so to do. And in case either of the said Trustees before named shall decline, or be unable to accept the said trust, as also in case of the decease, resignation, or continued inability to act of either of the said Trustees or of any other Trustees who may be appointed in their stead as herein provided, a new Trustee or Trustees shall be appointed by the joint nomination and choice of the Actuary of the Massachusetts Hospital Life Insurance Company, the Mayor of the City of Boston, and the Judge of Probate for the County of Suffolk for the time being, and the new Trustee or Trustees thus appointed shall have and exercise the same powers as are herein granted to the Trustees herein named. The Trustees herein named shall not be required to give bond for the faithful execution of their trust, nor shall the Trustees appointed in manner aforesaid be required to give bond, unless required so to do by the said Actuary of the Massachusetts Hospital Life Insurance Company, the Mayor of the City and the said Judge of Probate, or a majority of them. In case the said Trustees, or a majority of them, shall at any time deem it advisable and for the furtherance and promotion of the objects of the trust, to sell the land and buildings held by them in trust, for the purpose of changing the location, or procuring a better situation, they shall have the right so to do, and are hereby authorized and empowered to sell and convey by good and sufficient deed or deeds, the land and estates thus held in trust, and to invest the proceeds in the purchase of other suitable land in Boston, and the erection of buildings thereon, to be held upon the same trusts and used for the same purposes.—The said Trustees shall yearly and in each year render an account of their doings and expenditures to the Mayor and Aldermen of the City of Boston.

This wisely guarded and munificent bequest to aid efforts which are already begun to secure comfortable Homes for the Poor, we regard as one of the wisest Charities which has been established in this generation, whether regarded in the light of an educational or humane movement.

An "Association for building Model Lodging Houses for the Poor," was organized in Boston in 1851, of which Mr. Lawrence was a member. The Association has already erected at an expense of $40,000 two houses with accommodation for forty families, on Osborne Place of Pleasant Street in a crowded quarter of the city. Of their operation for one year, the Rev. C. F. Barnard, of Warren Street Chapel—whose ministry is among the extreme poor of the city, and who has no official nor immediate personal connection with the Association, remarks:

"Every thing thus far has exceeded the most sanguine expectations, and there does not appear to be the slightest indication of any thing short of entire success.

* The Association for building Model Lodging Houses for the Poor had its origin in a public meeting held in Warren Street Chapel, on the 12th of June 1846. At this meeting a committee, consisting of S. H. Perkins, Charles F. Barnard, H. T. Bowditch, Walter Channing, James R. Richards, D. R. Chapman, and Edward Winslow, was appointed "to consider the expediency of providing better tenements for the Poor." The Report of this committee was drawn up with great care, and after much research, and was published in a pamphlet of thirty-six pages.

The tenants invariably pay their rent a week in advance, with an alacrity and certainty that are the best proofs of their being comfortably located, fairly treated, and fully satisfied. To your private ear they might testify to more than that. Not a day or a dollar has been lost in the rent account. Hundreds of applicants have been waiting from the beginning in the vain hope of vacant apartments. The few necessary regulations of the Corporation have been cheerfully and completely observed. The Trustees by their welcome daily or weekly visits, by the establishment of a Circulating Library, and by other acts of kindness and brotherhood, have done every thing in their power to deserve success.

* * * * Next to the means of mental, moral, social, and religious culture, and far above all soup houses and every other form of public relief, stand these truly model tenements. Indeed, of what avail are our schools, our chapels, and our churches, if the pupils and hearers do not lodge and cannot live as they should?"

Mr. Lawrence had the satisfaction to know that his wise and munificent donation to Harvard College, was justly appreciated in his own family, and in the world of science, as the following particulars will show.

After reading his brother's letter to the Hon. Samuel A. Eliot, Treasurer of Harvard College, accompanying his donation of $50,000, Mr. Amos Lawrence addressed him the following note:*

"WEDNESDAY MORNING, June 9, 1847.

DEAR BROTHER ABBOTT:—I hardly dare trust myself to speak what I feel, and therefore write a word to say that I thank God I am spared to this day to see accomplished by one so near and dear to me this last best work ever done by one of our name, which will prove a better title to true nobility, than any from the potentates of the world. It is more honorable, and more to be coveted, than the highest political station in our country, purchased as those stations often are by time-serving. It is to impress on unborn millions the great truth that our talents are trusts committed to us for use, and to be accounted for when the Master calls. This magnificent plan is the great thing which you will see carried out, if your life is spared; and you may well cherish it as the thing nearest your heart. It enriches your descendants in a way that mere money never can do, and is a better investment than any one you have ever made.

Your affectionate brother AMOS

TO ABBOTT LAWRENCE."

In a letter to a friend, soon after, the same brother writes: "This noble plan is worthy of him: and I can say truly to you that I feel enlarged by his doing it. Instead of our sons going to France, and other foreign lands for instruction, here will be a place, second to no other on earth, for such teaching as our country stands now in absolute need of." These expressions of approbation from one with whom he had taken counsel not only in great mercantile and manufacturing operations, by which these large fortunes had been amassed, but in plans for expending the fortunes thus accumulated, in advancing great public interests, as well as in private charities—must have been particularly precious.

In his last painful illness, when "it is not what we have done for ourselves, but what we have done for others, we think of most pleas-

* Extracts from the Diary and Correspondence of the late Amos Lawrence; edited by his son. P. 244. Boston: Gould & Lincoln. 1855.

antly," Mr. Lawrence received a letter from Prof. Benjamin Peirce, of Cambridge, (than whom there can be named no one more competent to judge of the thoroughness and value of scientific training), respecting "the magnificent examinations" of the students of the Scientific School, which was published in the Boston Daily Advertiser of July and from which, we subjoin extracts: —

"A portion of the pupils examined were in the Chemical Department, and the remainder in that of Engineering. The appearance of the students has been excellent in every respect; and, with those in the Chemical department, I have been especially astonished at their brilliant success. Their replies were uniformly characterized with high precision and accuracy; and, the variety of subjects, with which they exhibited a familiarity worthy of masters in science, evinced the extent and thoroughness of their attainments. I am now persuaded that a new era of American education has really commenced with this school. * * These magnificent examinations should not be conducted with such extreme privacy, but the public should be induced to attend them as freely as those of West Point, and the Naval Academy. * * I cannot conclude without congratulating you upon the success which has been at length attained; and, it must smooth the pillow of your sickness to feel that your noble endowment is beginning to return a hundred fold in blessings to the country, and in benedictions upon its generous founder. You must greatly rejoice that the great and greatly loved man (Prof. Agassiz), whom you have placed with us as a colleague, is at length enabled to bless America with the rich productions of his fertile genius."

The death of Mr. Lawrence occurred during the Annual Session of the *American Association for the Advancement of Science*, at Providence. After announcing the fact, Prof. A. D. Bache, Superintendent of the Coast Survey, introduced resolutions expressive of the sincere condolence of the members of the Association with the bereaved family, and of their sense of the public loss in the decease of one of the most munificent patrons of science in the United States, who had identified his name forever with its progress by the foundation of the Scientific School. These resolutions were sustained with much feeling by the Rev. Dr. Wayland, of Brown University, Hon. S. B. Ruggles, of New York, Prof. Silliman, of Yale College, and other gentlemen eminent in the literary and scientific world, and adopted by each member rising in his seat.

Mr. Lawrence married on the 28th of June, 1819, Katharine Bigelow, eldest daughter of Hon. Timothy Bigelow, of Medford, who was a distinguished lawyer of his time, and held high State offices, those of Speaker and Councellor for many years. Eight children were the fruits of this marriage, three of whom died in infancy. The other five (three sons and two daughters) are all married and all reside in Boston.

Mr. Lawrence will long be remembered with pride by the mercantile community in which he lived, as a bright example of professional probity, sagacity, enterprise, and success; by the city, to whose prosperity he so largely contributed, and of whose numerous humane and literary institutions he was a liberal benefactor, and by the poor, whom he never forgot while living, and whose comfortable homes he will multiply when dead. By a large circle of friends at home and abroad, his presence will be associated with high honor, incorrupt integrity, cordial hospitality, a true and generous patriotism, and the noble graces of a christian faith. In the wide republic of letters and science, which knows no boundaries of city or country, his name will be associated now and in all coming time, with the University at Cambridge, as the founder of its Scientific School—as one, who in the language of Edmund Burke, "not contented with reigning in the dispensation of happiness, during the contracted term of human life strains with all the graspings of a vivacious mind, to extend the dominion of its bounty beyond the limits of nature, and to perpetuate itself through generations of generations as the guardian, the protector, and the nourisher of mankind."

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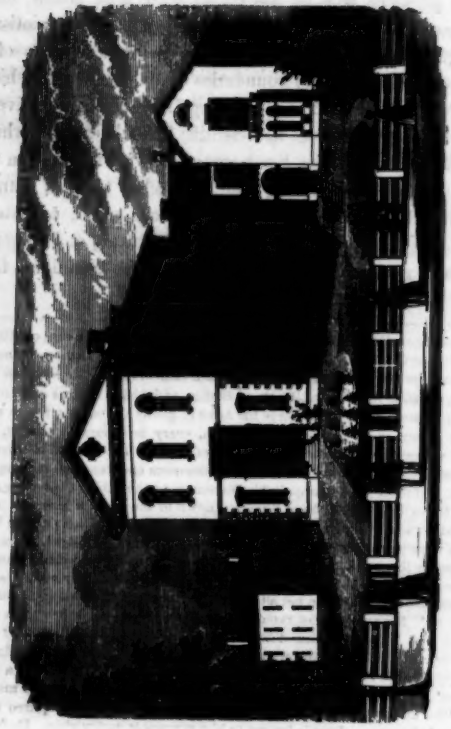
* Of Mr. Lawrence's Educational donations and bequests, besides the sum of $100,000 to the Scientific School at Cambridge, and $50,000 to the Model Lodging Houses, we may add the gift of $4,000 to the English High School and Latin School ($2,000 to each), as a fund for annual prizes, $5,000 to the Public Library of Boston, and $5,000 to the Franklin Library of Lawrence. His Pastor says: "He was in the *habit* of giving during his life, to every meritorious public object, every benevolent institution, every incorporated charity, and every association of a mere private nature for the relief of want." The amount of these donations exceed $250,000, while his private charities were numerous and constant, ranging from $3000 to $5000 a year. Of them Dr. Lothrop, in his Discourse, on the Sabbath following the funeral, mentions the following as having been "made known to me amid a scene of interest and solemnity, that we shall not soon forget. At the close of the funeral services on Wednesday, while crowds were passing up this aisle, to look upon the face of the dead, as I was standing here just beneath the pulpit, a gentleman, who I saw at once was a clergyman, came, and addressing me by name, asked if he might speak to me a moment. My reply was, 'Can you not chose some other time? I can not attend to any business amid this scene and with that body lying there.' His answer was, rapid as he could speak, as if his heart was bursting for utterance, and with tears streaming down his cheeks, 'I must leave the city at two o'clock and must speak now. It is of him who has left that body I would speak. Eighteen years ago I was a poor boy in this city, without means, and without friends. I was a member of the Mechanics' Apprentices' Association. Mr. Lawrence came to one of our meetings. He heard me deliver an essay I had written. He spoke to me afterwards—inquired into my circumstances and character. I made known to him my wants and wishes. He furnished me with means to acquire an education; when prepared, told me Harvard was best, but to go to what college I liked. I went to the Wesleyan University. He supported me at it. I am now a minister of the Gospel in the State of New York. I saw his death in the paper and a notice of his funeral to-day. I came on to attend it. He was my greatest benefactor. I owe it to him that I am a minister of the glorious gospel of Christ. I am not the only one he has helped thus. God will accept him. I felt that I must say this to some one, to whom can I better say it than to his clergyman?' and with this he hurried away, leaving me only time to learn his name and receive from him a kind promise to write to me."



LAWRENCE SCIENTIFIC SCHOOL AT CAMBRIDGE, MASS.

VIII. LAWRENCE SCIENTIFIC SCHOOL.

PRACTICAL instruction in the Mathematical, Physical, and Natural Sciences, upon a more extended plan than that pursued in the undergraduate department of Harvard, had been a subject of discussion previous to the time of President Everett. The materials for it had been accumulating. In addition to the Scientific men connected with the College, and the largest Library in the country, there were valuable collections of apparatus, numerous specimens of Natural History, a Botanic Garden, and an Observatory of the first rank. In his inaugural address,* [30th of April, 1846,] President Everett announced the project of a separate Scientific School in the following language:

"It is a question well worthy to be entertained, whether the time is not arrived when a considerable expansion may be given to our system, of a two-fold character; first by establishing a philosophical faculty, in which the various branches of science and literature should be cultivated, beyond the limits of an academical course, with a view to a complete liberal education, and secondly, by organizing a school of theoretical and practical science, for the purpose especially of teaching its application to the arts of life, and of furnishing a supply of skillful engineers, and of persons well qualified to explore and bring to light the inexhaustible natural treasures of the country, and to guide its vast industrial energies in their rapid development."

About this time a vacancy occurred in the Rumford Professorship by the resignation of Professor Treadwell. This situation was filled by the election of Professor Horsford, of New York, who soon after his arrival in Cambridge, submitted to the corporation a plan for the erection and furnishing of a Laboratory for instruction in Chemistry, and its application to the arts contemplating an expense of $50,000. This plan, in an able letter from the Treasurer, Hon. Samuel A. Eliot, was laid before Hon. Abbott Lawrence, who responded in a spirit of munificence altogether unexampled as follows:

"BOSTON, June 7th, 1847.

MY DEAR SIR,—

I HAVE more than once conversed with you upon the subject of establishing a school for the purpose of teaching the practical sciences, in this city or neighborhood; and was gratified when I learned from you that the government of Harvard University had determined to establish such a school in Cambridge, and that a Professor had been appointed who is eminent in the science of Chemistry, and who is to be supported on the foundation created by the munificence of the late Count Rumford.

For several years I have seen and felt the pressing want in our community (and, in fact, in the whole country) of an increased number of men educated in the practical sciences. Elementary education appears to be well provided for in Massachusetts. There is, however, a deficiency in the means for higher education in certain branches of knowledge. For an early classical education we have our schools and colleges. From thence the special schools of Theology, Law, Medicine, and Surgery receive the young men destined to those professions; and those who look to commerce as their employment, pass to the counting-house or the ocean. But where can we send those who intend to devote themselves to the practical applications of science? How educate our engineers, our miners,

* Everett's Orations and Speeches, Vol. ii, p. 497.

machinists, and mechanics? Our country abounds in men of action. Hard hands are ready to work upon our hard materials; and where shall sagacious heads be taught to direct those hands?

Inventive men laboriously reinvent what has been produced before. Ignorant men fight against the laws of nature with a vain energyy, and purchase their experience at great cost. Why should not all these start where their predecessors ended, and not where they began. Education can enable them to do so. The application of science to the useful arts has changed, in the last half-century, the condition and relations of the world. It seems to me that we have been somewhat neglectful in the cultivation and encouragement of the scientific portion of our national economy.

Our country is rapidly increasing in population and wealth, and is probably destined in another quarter of a century to contain nearly as many inhabitants as now exist in France and England together.

We have already in the United States a large body of young men who have received a classical education, many of whom find it difficult to obtain a livelihood in what are termed the learned professions. I believe the time has arrived when we should make an effort to diversify the occupations of our people, and develop more fully their strong mental and physical resources, throughout the Union. We have, perhaps, stronger motives in New England than in any other part of our country, to encourage scientific pursuits, from the fact that we must hereafter look for our main support to the pursuit of commerce, manufactures, and the mechanic arts; to which it becomes our duty, in my humble judgment, to make all the appliances of science within our power. We inherit, and are forced to cultivate, a sterile soil; and what nature has denied should be, as far as possible, supplied by art. We must make better farmers, through the application of chemical and agricultural science.

We need, then, a school, not for boys, but for young men whose early education is completed, either in college or elsewhere, and who intend to enter upon an active life as engineers or chemists, or, in general, as men of science, applying their attainments to practical purposes, where they may learn what has been done at other times and in other countries, and may acquire habits of investigation and reflection, with an aptitude for observing and describing.

I have thought that the three great practical branches to which a scientific education is to be applied amongst us are, 1st, Engineering; 2d, Mining, in is extended sense, including Metallurgy; 3d, the invention and manufacture of machinery. These must be deemed kindred branches, starting from the same point, depending in many respects on the same principles, and gradually diverging to their more special applications. Mathematics, especially in their application to the construction and combination of machinery; Chemistry, the foundation of knowledge and an all-important study for the mining engineer, and the key to the processes by which the rude ore becomes the tenacious and ductile metal; Geology, Mineralogy and the other sciences investigating the properties and uses of meterials employed in the arts; Carpentry, Masonry, Architecture, and Drawing, are all studies which should be pursued, to a greater or less extent, in one or all of these principal divisions.

To establish such a school as I have endeavoured to describe in connection with the University, and under the care and general guidance of its government, requires buildings with suitable lecture-rooms and philosophical apparatus, with models and plans, and a place for their deposit and safe-keeping, together with a *Cabinet*, where every description of wood, ores, metals, &c., may be deposited for the use of the students. Without the above appliances, the Professors would be workmen without tools. The University has already appointed Mr. Horsford Rumford Professor, who proposes to give instruction upon an enlarged plan in the science of Chemistry. I have often heard Professor Horsford spoken of in terms of high commendation, and as in all respects competent to take charge of this important department of science, and to bring out the most favorable results. The testimony rendered at home to Mr. Horsford's capacity has been very agreeable to me, and had satisfied me that the selection made by the government of the College was fortunate; but I have lately learned, in addition to the high character given him by his friends here, that the great practical chemist of the age (Liebig) has given his most unqualified testimony to the ability and fidelity of Professor Horsford, who was the pupil of Baron Liebig for two years.

I deem it of the highest importance, and, in fact, essential, that none but *first-rate* men should occupy the Professors' chairs in this School. Its success depends upon the characters of the instructors. They should be men of comprehensive views, and acknowledged talents, possessing industry and integrity, with an enthusiastic devotion to the great interests of science. They should love their profession, and work in it day by day. Such teachers will soon gather around them a large number of pupils.

To carry out this course of education in its practical branches, there should be the most thorough instruction in Engineering, Geology, Chemistry, Mineralogy, Natural Philosophy, and Natural History. Chemistry is provided for; and in the last two branches, instruction might, perhaps, be given by the present College Professors. In addition to these, it would be necessary to obtain the services, at stated periods, of eminent men from the practical walks of life. The Law School is taught by distinguished lawyers of the highest reputation. The Medical School by distinguished physicians. In like manner, this School of Science should number among its teachers men who have practised and are practising the arts they are called to teach. Let theory be proved by practical results.

To defray the expenditures, means must be procured for the erection of suitable buildings (not including dwelling-houses), the purchase of apparatus, furniture, &c., and provision must be made for the comfortable support of the Professors and other teachers employed. For this purpose, let the students be invited freely from all quarters, at a moderate charge for tuition. Let the numbers be only limited by the size of the lecture-rooms, and I cannot entertain a doubt that a large revenue would be derived from tuition fees. I would suggest three permanent Professors, namely, one of Chemistry, (already appointed), one of Engineering in its various branches, and one of Geology. The support of the first is for the present time provided for. For the other two a moderate fund must be obtained, as a nucleus of a farther sum which should be added to it, to make the capital equal to that of the Rumford Professorship. The Professors in this School should depend, to a considerable extent, upon fees; it is the best guarantee to exertion and fidelity, and the permanent prosperity of the institution. I will therefore further suggest, that each of the above Professors shall receive, after all ordinary expenses shall have been paid, one half of the tuition fees till they amount to a sum, annually, not exceeding three thousand dollars, including their stated salaries; and that the government of the College pay such sums to other teachers, whether temporary or permanent, as they may deem expedient, and that the other half of the said tuition fees be reserved and added to any fund that may be hereafter contributed to establish and found the two Professorships before mentioned.

I have now, my dear Sir, given you a brief and very imperfect sketch of such a school of sciences as I believe the condition of our extensive and growing country requires, and you will ask how the means are to be obtained to carry out the plan, when we shall soon have an appeal made to our liberality, as well as to the sense of our best interests, to contribute a large sum of money for the purpose of finishing the astronomical department so auspiciously commenced in Cambridge. This department of science has already engaged the public sympathy, and will, I doubt not, be taken up at an early day, and placed in an independent and useful position. I cherish a wish to see the Observatory, the telescope, and every instrument required to prosecute the heavenly science, ready for use, and do not intend to interfere with the claims the world has upon our community to accomplish this great and important object. Nor do I mean to occupy the ground of another branch of science that will, I suppose, at a future time, present strong claims upon the public bounty. I allude to Natural history, now in charge of that accomplished naturalist, Dr. Gray. I wish to see all these branches of science prosecuted with vigor, and moving forward in perfect harmony at Cambridge.

"I therefore propose to offer, through you, for the acceptance of the President and Fellows of Harvard College, the sum of fifty thousand dollars, to be appropriated as I have indicated in the foregoing remarks. The buildings, I have supposed, without having made estimates, could be erected, including an extensive laboratory, for about thirty thousand dollars. If so, there will remain the sum of twenty thousand dollars; and I suggest that whatever sum may remain, after the erection and furnishing of the buildings, should form the basis of a fund, which together with one half of the tuition fees, till the amount shall yield the sum of

three thousand dollars annually, shall be equally divided between the Professor of Engineering and the Professor of Geology, and be made a permanent foundation for these Professorships. The object is, to place the three Professors in this School in the same pecuniary situations. I beg to suggest, further, that the whole income of this School be devoted to the acquisition, illustration, and dissemination of the practical sciences for ever.

The details, however, and conditions of this donation, may be hereafter arranged between the Corporation and myself. I now leave the whole subject in the hands of the gentlemen composing the Corporation, in the hope and faith that the plan may be adopted and executed with as much expedition as may be consistent with economy; and that it may prove honorable to the University, and useful to the country.

I pray you, dear Sir, to believe I remain,
Most faithfully, your friend,
ABBOTT LAWRENCE."

Soon after the receipt of the donation of Mr. Lawrence, Professor Agassiz, of Switzerland, was invited to the chair of Zoology and Geology, and at a later period Lieut. Eustis, of the army, to that of Engineering. At the commencement of 1848, the corporation conferred upon the institution the name of "Lawrence Scientific School."

In the summer and autumn of 1849, a Laboratory,* unsurpassed in Europe even, in its conveniences for practical instruction, was erected and furnished, and in the year following a building was constructed for the temporary accommodation of the departments of Zoology, Geology, and Engineering. Besides the Professors already mentioned, the Faculty of the Scientific School embraces Professor Peirce in the department of Mathematics, Professor Lovering in Physics, Professor Gray in Botany, Professor Wyman in Comparative Anatomy and Physiology, and Professor Cook in Mineralogy.

The plan of the School has been modified from time to time, as the wants of the pupils in attendance and the experience of the Instructors made necessary. The School is essentially a collection of independent departments, each having the exclusive control of its own internal arrangements, without reference to other departments, and sustaining a complete course of instruction for itself.

The recent bequest of Mr. Lawrence, to the amount of $50,000, will enable the corporation, to further increase the facilities for instruction and research in the School.

We will now proceed to detail the requirements and courses of instruction in the Lawrence Scientific School, Cambridge.

REQUISITES FOR ADMISSION.—Candidates for admission must have attained the age of eighteen years, have received a good common English education, and be qualified to pursue to advantage the courses of study to which they propose to give their attention. They must furnish satisfactory evidence of good moral character, give bonds, in the sum of $200, signed by two bondsmen, one of whom must be a resident in Massachusetts, for the payment of all dues to the School, and register their names with the Dean of the Faculty. They will be admitted only at the commencement of a Term, except in extraordinary cases.

* Plans of the Building occupied by the Scientific School, and of the Laboratory will be given in a future number of the Journal.

REQUIREMENTS OF STUDENTS.—Students of the Scientific School are required to board and lodge at licensed houses. They shall conduct themselves in a courteous and gentlemanly manner, and shall comply with all the regulations of the School and of the Department to which they belong. They are expected statedly to attend religious worship, at such place as their parents or guardians may direct.

A Scientific Student violating these regulations, or participating with an Undergraduate in an offence against the laws of the College, is liable to dismission from the School.

DEGREES.—The degree of *Bachelor of Science* may be conferred upon any Student who, having attended the instructions of the School for at least one year, and completed the prescribed course of studies in one or more Departments, shall have passed a satisfactory public examination.

The Department or Departments in which the Student has been examined, and his grade of merit, will be specified in the Diploma, and each Diploma will bear the signatures of the President and Faculty.

Certificates may be granted to Students who do not graduate, stating the time they have been present in the School, the studies pursued, and the progress made.

COURSES OF INSTRUCTION.—The number and choice of studies are optional on the part of Students, who will, however, be counselled on these points by the Professors; but a punctual attendance on all prescribed exercises will be required.

I. CHEMISTRY.—Professor Horsford will receive Special Students to the course of instruction in Experimental Chemistry and research, who will give their attendance in the Laboratory from 9 o'clock, A. M. till 5 o'clock P. M.

The course will include instruction in—

Theoretical and Experimental Chemistry, and Systematic Qualitative and Quantitative Analysis, in all their branches;

Pharmaceutical Preparations for the Laboratory and Apothecary, and the methods for the determination of the value of drugs generally;

Mineral assays, Metallurgy, analysis of Soils and Ashes, examination for poisons, manufacture of Manures, and the various determinations required in the practice of medicine.

The solution of problems of research in experimental science and in the applications of science to the arts and manufactures.

In addition to the practical instruction in Chemistry as an art, in which each Student is necessarily a class by himself, there is a systematic daily exercise, on the blackboard, in the solution and explanation of chemical problems.

A knowledge of Algebra, Geometry, and Trigonometry, and an acquaintance with Stöckhardt's Elements of Chemistry, or its equivalent, are required for admission.

TEXT-BOOKS AND WORKS FOR READING AND REFERENCE.—Will's Outline of Chemical Analysis. Fresenius's Quantitative Analysis. Regnault's Elements of Chemistry. Gmelin's Hand-Book of Chemistry.

II. Zoölogy and Geology.—The instruction in this Department consists, alternately, of a course of Lectures by Professor Agassiz on Zoölogy, embracing the fundamental principles of the classification of animals, as founded upon structure and embryonic development, and illustrating their natural affinities, habits, geographical distribution, and the relations which exist between the living and extinct races; and of a course on Geology, both theoretical and practical. The course on Geology will be delivered during the First Term.

Besides the instructions of the lecture-room, Professor Agassiz will afford the Students access to his laboratory during certain hours, in order to show them how to observe isolated facts, how to determine living and fossil animals, how to identify rocks of different formations, and how to conduct a regular geological survey.

For those who intend to make a further study in these sciences, excursions in the neighborhood will be made in term-time, and longer excursions in vacation, to those parts of the country, near or remote, which offer the most instructive field for observation.

Text-Books and Works for Reading and References.—Hitchcock's Elementary Geology. De la Beche's Geological Manual, Geological Observer, and Researches in Theoretical Geology. Lyell's Elements of Geology, and Principles of Geology. Guyot's Earth and Man.

For Local Information.—Hitchcock's Geology of Massachusetts. Also, The Geological Reports published by the different States. Lyell's Travels in North America.

III. Engineering.—Professor Eustis will receive Special Students to the course of instruction in Engineering, who will give their attendance at the School from 9 o'clock, A. M. to 5 o'clock, P. M.

The course will include instruction in—

Surveying, with the use of the instruments, and actual operations in the field.

Drawing in all its branches; topographical, outline, shaded, and tinted, including Ismoretic Projections.

Analytical Geometry and Differential and Integral Calculus.

The principles of Mechanics, and their appilcation to Machinery and Engineering.

Descriptive Geometry.

The theory of shades, shadows, and perspective.

The application of Descriptive Geometry to masonry and stone-cutting in the construction of groined and cloistered arches, domes, &c.

The nature and properties of building materials, and their application to the construction of railroads, canals, bridges, &c.

The instruction will be given by daily exercises at the blackboard and by lectures.

A knowledge of Algebra, Geometry, and Trigonometry is required before admission.

IV. Botany. Professor Gray will give, during the Second Term, a course of instruction in Structural Botany and Vegetable Anatomy, with microscopical demonstrations. Also, a course of twenty-four Lectures on Systematic Botany.

TEXT-BOOKS AND WORKS FOR READING AND REFERENCE. Gray's Botanical Text-Book, 4th ed. Gray's Manual of the Botany of the Northern United States. Mohl's Principles of the Anatomy and Physiology of the Vegetable Cell. Adrien de Jussieu, Cours Élémentaire de Botanique, or the English Translation.

V. COMPARATIVE ANATOMY AND PHYSIOLOGY. Special instruction will be given in the Anatomical Museum and Laboratory in Holden Chapel, by Professor J. WYMAN.

During the Second Term of the present Academic Year, there will be delivered a course of thirty Lectures on Comparative Anatomy and Physiology, commencing in March, 1856.

Instruction will also be given to Medical Students in the usual branches of study necessary to a medical education.

BOOKS OF REFERENCE.—Comparative Anatomy, by Siebold and Stannius, translated by W. I. Burnett, M. D. Carpenter's General and Comparative Physiology, 4th ed. Wagner's Comparative Anatomy of Vertebrated Animals. Rymer Jones's Outlines of the Animal Kingdom. Kirke's and Paget's Hand-Book of Physiology. Agassiz's Lectures on Comparative Embryology. Owen's Lectures on Comparative Anatomy. Müller's Physiology.

VI. MATHEMATICS. Instruction will be given in the *Higher Mathematics*, and especially in *Analytical and Celestial Mechanics*, by Professor PEIRCE.

Private instruction in the various branches of Mathematics will be given to those desirous of receiving it, by competent instructors residing at the University.

TEXT-BOOK AND WORKS FOR READING AND REFERENCE. 1. CURVES AND FUNCTIONS. *Regular Course.* Peirce. Curves and Functions. Lacroix. Calcul Differentiel et Intégral. Cauchy. Les Applications du Calcul Infinitésimal à la Géométrie. Monge. Application de l'Analyse à la Géométrie.

Parallel Course. Biot. Géométrie Analytique. Cauchy. Cours d'Analyse de l'École Royale Polytechnique. Hamilton's Researches respecting Quaternions. (Transactions of the Royal Irish Academy, Vol. XXI.)

2. ANALYTICAL AND CELESTIAL MECHANICS. Laplace. Mécanique Céleste, translated, with a Commentary, by Dr. Bowditch. Vol. I. Bowditch. On the Computation of the Orbits of a Planet or Comet; Appendix to Vol. III. of his Translation. Poisson. Mécanique Analytique. Lagrange. Mécanique Analytique. Hamilton. General Method in Dynamics, from the London Philosophical Transactions for 1834 and 1835.

Regular Course. Airy. Figure of the Earth, from the Encyclopædia Metropolitana. Gauss. Theoria Motuum Corporum Cœlestium. Bessel. Untersuchungen. Leverrier. Développements sur Plusieurs Points de la Théorie des Perturbations des Planètes. Leverrier. Les Variations Séculaires des Élémens des Orbites, pour les Sept Planètes Principales. Airy. Tides, from the Encyclopædia Metropolitana.

Parallel Course. Théorie des Mouvements de Mercure. Leverrier. Recherches sur les Mouvements de la Planète Herschel. Adams. Explanation of the Observed Irregularities in the Motion of Uranus, on the Hypothesis of Disturbances caused by a more distant Planet.

3. MECHANICAL THEORY OF LIGHT. Airy. Mathematical Essays. MacCullagh. On the Laws of Crystalline Reflection and Refraction. (Transactions of the Royal Irish Academy, Vol. XVIII.) Cauchy. Exercices d'Analyse et de Physique Mathématiques. Neumann. Theoretische Untersuchung der Gesetze, nach welchen das Licht reflectirt und gebrochen wird. (Transactions of the Berlin Academy for 1835.)

VII. MINERALOGY. Professor Cooke will receive, during the Second Term, Special Students to the course of instruction in Mineralogy at his Laboratory.

Text-Book. Dana's Mineralogy.

The following courses of Lectures delivered to Undergraduates will be open without charge to members of the Scientific School.

A course on *Chemistry*, by Professor COOKE.

A course on *Systematic Botany according to the Natural System*, by Professor GRAY.

A course on *Physics*, in the Second Term, by Professor LOVERING.

A course on *Human Anatomy and Physiology*, by Professor WYMAN.

The formation of a Museum of Natural History, on an extensive scale, has been commenced, under the superintendence of the Professors in the several Departments.

The Anatomical Museum, the Botanic Garden, the Observatory, and the Public Library, are accessible to the Students of the Scientific School.

Fees for *special instruction* of those who become private pupils of any Professor, and pursue studies, practical exercises, or experimental research, or make excursions, under his particular direction, the fees are:—

In the Department of Chemistry, for instruction six days in the week, per Term of twenty weeks *fifty dollars*. For Laboratory apparatus and supplies, *twenty-five dollars*. For one half or any less fraction of a Term, two thirds, of the above sums.

The Special Students in Chemistry will also supply themselves, at their own expense, with such articles of apparatus as are consumed in using, such as flasks, corks, tubing, lamps, crucibles, &c., together with alcohol and platinum, and gold and silver solutions.

In the Department of Engineering, for instruction six days in the week, *fifty dollars* per Term. For three days in the week, two thirds, and for one day, one third, of the above sum.

The Special Students in Engineering, will supply themselves with drawing materials, necessary text-books, &c.

In any of the other Departments, the fees for special instruction may be agreed upon with the instructor.

The Lectures delivered in the Scientific School may be attended by members of the School, and by members of any of the Professional Schools, and by persons not otherwise connected with the University, on payment of a fee of five dollars *per course*. Students of the Scientific School may attend, without charge, any of the Lectures delivered to Undergraduates by the Professors in the Academical Department. They may also study any one of the foreign languages taught in the University, on payment of a fee of *five dollars* per Term.

The other expenses for a Term are nearly as follows,

Board, twenty weeks, from $3.00 to $5.00 per week,	from $60	to $100
Room-rent, including care of room, but not making fires. .	26	to 75
Furniture (if the Student does not furnish his room), . .	10	to 20
Washing, ...	7	to 15
Fuel, for the First or Winter Term, from August to January,	12	to 25
" for the Second or Summer Term, from Febuary to July,	6	to 10
Servant (if one is employed) to make fires, &c.	5	to 10
	$120	to $245

Fuel, prepared for use, is furnished by the lessee of the College Wharf, at the market price, if the Students desire it.

For further information concerning the School, application may be made to Professor E. N. Horsford, Dean of the Faculty.

IX. AMERICAN COLLEGES.

A SKETCH OF THE HISTORY OF ILLINOIS COLLEGE, JACKSONVILLE ILL.

Of the many chartered institutions in our new States, which have come into being within the last quarter of a century, there are few whose beginnings have been attended with more thrilling interest, and with better promise, than those of Illinois College. It is not on this account, however, that we begin our series of historical sketches of American colleges, with one of this institution. It would have been better, perhaps, had we commenced with Harvard, and followed the order of their ages in our historical notices. But this would have been impracticable, without frequent delays in the series, for want of the necessary documents. We hope also, that, by suiting our demands to their convenience, the Presidents of colleges, or others connected with them, will be induced to furnish to our hands better histories of their own institutions, than it would be possible for us to condense from any published documents. No such history having yet reached us, from the older institutions, we are guided in our selection of Illinois College, as the subject of our present notice, by the fact, that its quarter centennial anniversary was celebrated at its last commencement, and we have in our hands, through the kindness of the author, President Sturtevant's "Historical Discourse," delivered on that occasion, and prepared for publication by order of the Trustees. It is both reliable in its statements, and touching and eloquent in its reminiscences. From this discourse, principally, are derived the materials of the following sketch.

Instruction was commenced in Illinois College on the 1st of January, 1830. It was then a day school for boys, with a single teacher. It was a college only in the intention and hopes of its founders, and in the providence of God. The moving principle, the all-pervading cause of the founding of this college, was the ever-abiding purpose of the religious people of this country to disseminate the influence of the Gospel by means of institutions of learning. "There is no feature of American society," says President Sturtevant, "which is more gloriously unique and characteristic. There is nothing like

it in the history of colonization in any other nation or age of the world. It is prominently to this cause that we owe the inception and the growth of our whole system of higher liberal education. This cause was the parent of Harvard, Yale, and the other colleges of New England, and not less of Nassau Hall; and these are the parents of the college system of the whole country." He claims, also, for the founders of most of the colleges of our new States, that they have been impelled by the same motives, and actuated by the same principles, with our fathers of the older States; and they are encouraged by this fact to hope for a like signal success.

The subordinate causes and agencies, which resulted in the founding of Illinois College, were various and wide asunder in their origin, but moved by the same spirit of enlightened philanthropy.

On the one hand, the late Rev. John M. Ellis, having then just completed his studies at the Andover Theological Seminary, was sent as a missionary to the State of Illinois, by the American Home Missionary Society, in the year 1826. He found a population of 130,000, and but three Presbyterian ministers in the State. Other Christian churches were few, and feeble, and scattered; and there were few of competent qualifications to dispense the Word of Life. Impressed with the necessity of decisive measures in the very infancy of the State, he early conceived the idea of founding an institution of learning. His conceptions were clear and vivid of the necessities of coming generations in so great a State, and he urged his views with earnestness and self-sacrificing zeal. His efforts were seconded by enlightened and religious men, committees were appointed at his suggestion, various places were visited, Jacksonville was agreed on as the most desirable site, a subscription of about $3,000 was pledged, and a plan for the institution was adopted, which has since been greatly modified. It contemplated a Primary, a Collegiate, and a Theological Department, together with provision for the self-support of the students, in part, by manual labor. But the means secured were inadequate to the carrying out of a plan so complicated, and nothing further was done until the autumn of 1828, when Mr. Ellis, in his report to the Home Missionary Society, made a glowing statement of the present and prospective wants of the Western country, and particularly of Illinois, and appealed to the public for aid on behalf of the proposed institution at Jacksonville. This report was published in the *Home Missionary*.

In the mean time, another train of causes was in operation in quite a different quarter. There was, in Yale College, a Society of Inquiry concerning Missions. Most of its members were preparing for the Christian ministry, and their object was to acquire the information

necessary to enable them to judge wisely in selecting their own fields of labor. They were accustomed, also, to exhort one another by such examples of Christian consecration as David Brainerd, Henry Martyn, and Samuel J. Mills, to forget their own private interests, in their devotion to the kingdom of Christ. Soon after a meeting of this sort, in November, 1828, several of the members held private conferences together, and agreed to associate, in the selection of some field, in the far distant West, where they might be sent as missionaries, and live and labor in each other's vicinity. The idea was soon added, that they should unite their efforts in founding an institution of learning, to grow up with the people, and be to them what a New England college is to the surrounding population. This plan was fast ripening into action, when Mr. Ellis' report, in the *Home Missionary*, was received. The thought at once occurred to them, that, perhaps, that was the field to which God, in his providence, was directing them! A correspondence was immediately opened with Mr. Ellis, their proposal was more than welcomed by him and his associates, and early in the year 1829, seven young men, members of the Theological Department of Yale College, were prepared to subscribe their names to a solemn pledge, to one another, and to God, that they would devote their lives to the cause of Christ in the distant and wild State of Illinois. Of this association, President Sturtevant and Rev. Theron Baldwin—now Secretary of the Western College Society—were members, and were the first to enter the field. Each of the others followed in due time, and redeemed their pledge; and one only has been removed by death.

Having pledged themselves to this enterprise, the young men immediately commenced preparing and suggesting such modifications of the plan proposed by Mr. Ellis, as were necessary to adapt it to become the substantial basis of a university. In making these suggestions, they followed the advice of the President and Professors of Yale College. Their plan was readily adopted by the Trustees and subscribers at Jacksonville. The fundamental principles then adopted, which are still the basis of the institution, are thus expressed:

1. That there be a Board of fifteen members, besides the President of the institution, who shall have the entire direction of the Seminary, independent of any extraneous influence, and that they shall be sacredly pledged to appropriate all donations which they may choose to receive, according to the expressed wishes of the donors.

2. That the majority of the Board of Trustees, ever after its organization, shall have power to fill all vacancies occurring in the same.

"The true spirit of these two short sentences," says President

S., " is to be inferred from the fact, that the venerable advisers, whom we had consulted, had explicitly warned us against subjecting the institution either to political or denominational control."

The young men also engaged to raise $10,000 for the proposed institution, which, through the co-operation of their friends, they accomplished in a few months, and in the autumn of 1829, Mr. Baldwin and Mr Sturtevant went on their mission to Illinois, and on the 18th of December united with the Trustees and subscribers at Jacksonville in constituting a Board, according to the terms of agreement. A substantial edifice of brick, which now constitutes the south half of the College building, was already erected and partly finished. In that building instruction was commenced. Mr. Sturtevant was the only teacher, with nine pupils, who were increased to thirty before the close of the year, all in the rudiments of study. In the course of that year, Rev. Edward Beecher, D.D., of Boston, was elected President of the institution, and entered upon his duties in 1831.

" Two enterprises entered on, the next year, to both of which the Trustees were almost irresistibly impelled, by the public opinion of the time, have proved unprofitable to all concerned, and the chief sources of all the embarrassments of the institution. They were the erection of the large building, for dormitories, which was destroyed by fire in 1852, and the establishment of a system of manual labor, as conducive to the health and economy of the students."

The large building referred to, was erected in accordance with a long established and then unquestioned opinion of the necessity of such an outlay. It was an error, for which the public opinion of the time was responsible; and long before the building was destroyed, the Trustees had become entirely convinced of the badness of the system, and were prepared for the adoption of a better. The students immediately sought and obtained private accommodations, and the advantage, on the score of social and moral habits, has been greatly in favor of the present system. Discipline, also, is more easy and salutary.

The other unfortunate enterprise is thus alluded to by the President: " The scheme of manual labor-schools was one of the then newborn favorites of the more ardent class of progressives, but had been very generally received by the public, and must needs be subjected to the test of experience. This College came into being just at the unlucky moment, when it must needs bear a part in the experiment."

The scheme, however, after considerable pecuniary loss, was abandoned, as fallacious and impracticable.

The Trustees made early application to the Legislature for a char-

ter, but met with much opposition, and were not incorporated until 1835; and when the charter was granted, it limited the quantity of land which the corporation might possess to a single section, and forbid the establishment of a Theological Department. But these restrictions have since been removed, and are worthy of mention only as way-marks of the progress of legislation, in Illinois, in intelligence and liberality.

The first class graduated in 1835, and consisted of two members only. The whole number of alumni is now one hundred and thirty, of whom one hundred and eighteen are living. The institution has also afforded partial instruction to more than a thousand pupils, through whom it is exerting an important influence on the social, moral, and religious destinies of the State and of the world. It has, indeed, been greatly blessed in its religious interests; many have been hopefully converted within its walls, and are occupying useful positions in the ministry and in other professions.

It has been objected to this College, that it has had fewer names on its annual catalogues than most Western colleges, with which it has been compared. This is accounted for by Dr. S., from the fact, that its Trustees have been more select in their object. They have not sought to monopolize the education of the region in their own institution, but to give it its proper place in a system adapted to the wants of the people of the State. They have accordingly made less of their Preparatory Department than some other Western colleges, and have encouraged the public schools in its vicinity, and other institutions—the Female Academy of Jacksonville, the Institution for the Deaf and Dumb, the Hospital for the Insane, an institution for instructing the blind, the Female College of the Methodist Conference, the Berean College, and a public school on a generous plan, already numbering more than five hundred pupils—so that it is doubted whether there is another place on the continent, which, in proportion to its population, equals Jacksonville in the number of its institutions of education and philanthropy.

This College has passed through one great financial crisis, which brought it very near the point of extinction. A subscription of more than one hundred thousand dollars had been obtained in 1835–6, the interest of which was relied on for current expenses, and the payment of debts incurred in providing for the manual labor scheme, the principal to be paid at a future day. But this was swept away by the pecuniary revulsion which followed. The subscription utterly failed, and the College was relieved of its debt only by parting with its property, excepting its necessary fixtures at Jacksonville. And here it must have suspended its operations in 1848, but for the

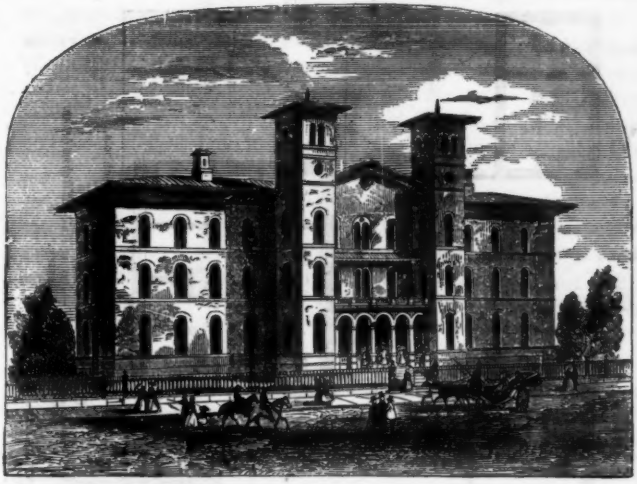
annual appropriation it was then, and is still receiving, from the Western College Society.

Since that time a brighter day has dawned. A permanent endowment has been secured of $35,000, and measures are in operation by which it is hoped soon to increase it to $50,000, principally at the West. The institution may now be regarded as fully established, on a plan adapted to indefinite expansion, and to permanent and immense usefulness, in a great State unsurpassed for natural resources, and in immediately prospective wealth and population.

Soon after the resignation of Dr. Beecher in 1844, Mr. Sturtevant was elected President, and the following names now constitute the Faculty of Illinois College:

Rev. JULIAN M. STURTEVANT, D.D., *President*, Professor of Moral Philosophy, and Blackburn Professor of Divinity.
SAMUEL ADAMS, A.M., M.D., Professor of Chemistry and Natural Philosophy
Rev. WILLIAM SANDERS, A.M., Professor of Rhetoric and Elocution.
Rev. RUFUS NUTTING, Jr., A.M., Professor of the Greek and Latin Languages and Literature.
RUFUS C. CRAMPTON, A.M., Professor of Mathematics and Astronomy.
JOSEPH C. PICKARD, A.M., Tutor in Modern Languages and Literature.
ALFRED N. DENNY, A.B., Tutor in the Preparatory Department.

If it is considered that the population of Illinois was only about 160,000 at the time when instruction was first commenced in this College, and that it was thus early planned and sustained by the exertions of a few young men, as an indispensable auxiliary to their work as Christian missionaries to a new State, its inception and the wisdom with which it has been planted and conducted must be regarded as quite extraordinary. The religious principle which led to the undertaking, in an age of great benevolent enterprises, was neither new nor singular. Still, it was a bold endeavor to do a great thing for the cause of learning and of Christian civilization in the great West, whose western boundary was then within the valley of the Mississippi. And there is a moral sublimity in the steady perseverance with which those young men have grown old in the prosecution of their enterprise. In the mean time, the population of the State has become 1,100,000, and Illinois College, as the parent institution, holds a proud eminence among the many schools and colleges which now constitute the educational system of that immense commonwealth, and honorably co-operate in elevating the standard of instruction, and in diffusing useful knowledge and salutary principles among the people. P.



PLANS AND DESCRIPTION OF THE BUILDING FOR THE FEMALE INSTITUTE, RICHMOND, VIRGINIA.

The RICHMOND FEMALE INSTITUTE was established under a charter from the Legislature of Virginia, passed March 2, 1853, with authority to confer diplomas and literary distinctions,—"to offer to young ladies the facilities for instruction to be found in our best colleges for young men." It embraces three departments—a Preparatory, Collegiate, and Esthetic; and in 1855, there were fifteen teachers, and 250 pupils.

The building was designed with much care by Mr. Thomas A. Teft, Architect of Providence, R. I., after a general plan submitted by Rev. Basil Manly, Jr., the President of the Institute. The lot has a front of 326 feet, and is beautifully located in one of the most central, shaded, and eligible neighborhoods in the city.

When completed the building will present a front of 185 feet. The wings each 30 feet as shown in Fig. 2, are not yet erected. In the Basement, which is above ground, are two school-rooms for the Preparatory Department, each 40 by 20; dining-rooms, store-rooms, bathing-rooms, &c. Beneath is a sub-basement for kitchen, fuel, &c.

On the FIRST STORY, [Fig. 3,] are two parlors for boarders and visitors, the school-room of the Collegiate Department, five recitation rooms, &c., parlor and sitting room for the President's family, and the Steward's office.

On the SECOND STORY, [Fig. 4,] is the Library and Reading-room, and four rooms for musical instruction, with chambers for boarders.

On the THIRD STORY, [Fig. 4,] the room over the Library is occupied for lectures by the Professor of Chemistry and Natural Philosophy, with rooms adjacent for apparatus and Laboratory.

In the Attic, or FOURTH STORY, are two rooms lighted by sky-lights for drawing and painting, and a large hall for calisthenic exercises. One of the towers is used as a belfry, and the other as an observatory. The whole building is warmed by four furnaces, ventilated by properly constructed flues, lighted by gas, and provided with water in every apartment.

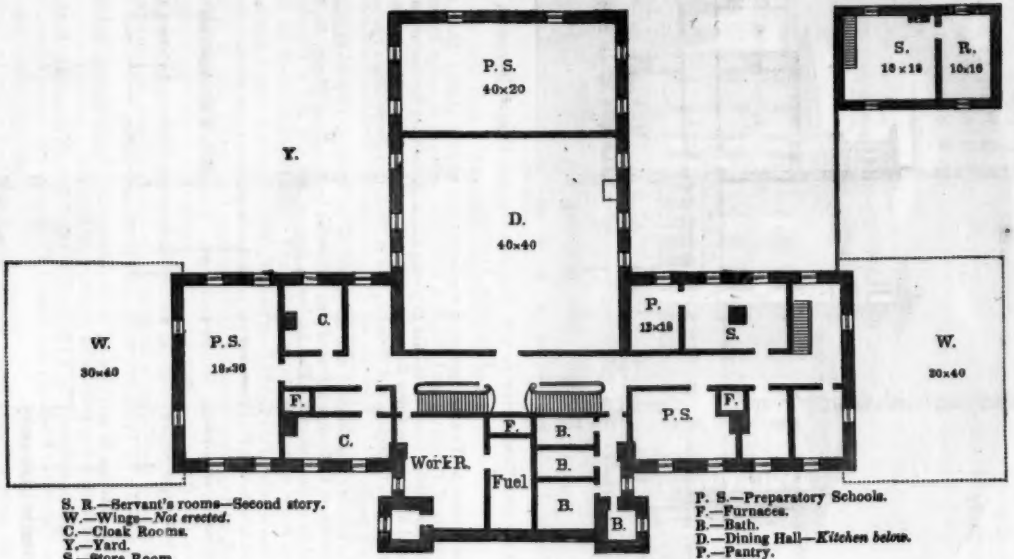


Fig. 2. Basement Story.

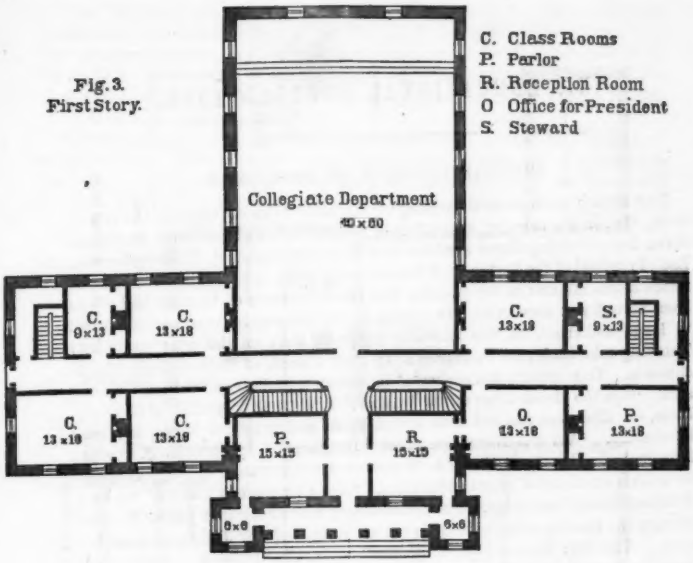


Fig. 3.
First Story.

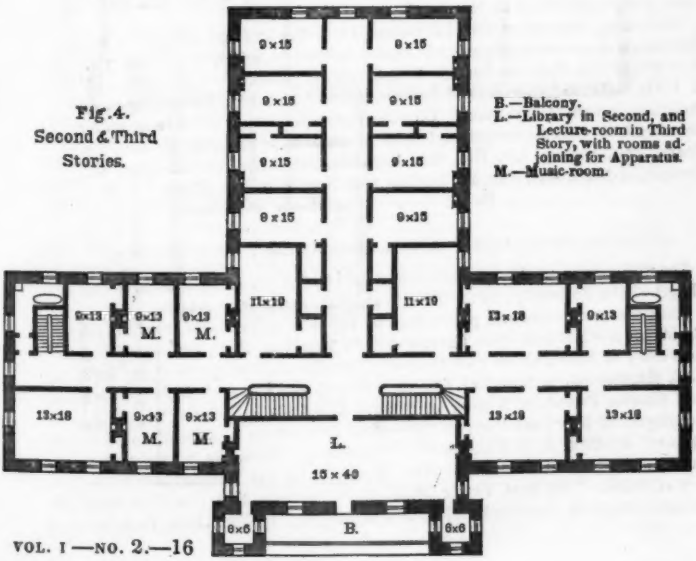


Fig. 4.
Second & Third
Stories.

XI. EDUCATIONAL INTELLIGENCE.

AMERICAN INSTITUTE OF INSTRUCTION.

The twenty-sixth annual meeting of this association convened in the city of Bath, Me., on the morning of the 21st of August last, and continued its sessions three days—holding three sessions each day—the President, Thomas Sherwin, Esq., Principal of the Boston High School, being in the chair. The citizens manifested much interest in the meeting, and the attendance of teachers and others from abroad was numerous. In course of the sessions, lectures were delivered to large audiences, on the following subjects, viz.: on the question, "May Teaching take rank as a Profession?" by Prof. Tweed, of Tufts College, Massachusetts. This lecture was spoken of as a very ingenious and valuable discussion. "On the Moral Office of the Teacher," by Rev. G. Reynolds, of Roxbury, Mass.—a discourse marked with sound sense and practical views, able and interesting. "On the Education of our Daughters," by Rev. E. P. Weston, Principal of a Female Seminary in Maine—a discriminating and urgent appeal for a high standard of female education. "On Unconscious Tuition," by Prof. Huntington, of Cambridge. This exceedingly rich and genial production constitutes the leading article in the present number of our JOURNAL AND REVIEW. The Rev. Thomas Hill, of Massachusetts, also delivered a lecture, and maintained with earnestness and ability that "Geometry must be, by eternal laws, the foundation of all learning."

Interesting discussions were intermingled with the business and public performances of the sessions; and two questions were especially considered, viz.: 1. "Ought the State to Furnish Free Collegiate Education to its Citizens?" 2. "The Relative Importance of Ancient Classical and Scientific Studies to an American System of Education." On these topics and others, which came up for occasional discussion, earnest and spirited remarks were made by Rev. Dr. Sears, Prof. Crosby, Mr. Hill, Mr. Reynolds, Mr. Allen, of Worcester, Mr. Bunker, of Nantucket, Rev. Mr. Cushman, of Newcastle, and others. P.

AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF EDUCATION.

The fifth session of this association was held in the city of New York, in the Chapel of the University, on the 28th, 29th, 30th, and 31st of August.

Addresses were made and papers read by the retiring President, Prof. A. D. Bache, on a "National Free University;" by President H. P. Tappan, of the University of Michigan, on "Progress of Educational Development;" by Rev. E. B. Huntington, of Stamford, Ct., on "Mental and Physical Activity;" by Rev. Charles Brooks, of Boston, on "Moral Education in Schools;" by J. N. McElligott, of New York City, on "Debating as a means of Educational Discipline;" by Prof. F. D. Huntington, of Cambridge, Mass., on "Unconscious Tuition;" by Prof. D. Olmsted, of New Haven, Ct., on the "Democratic Tendency of Science;" by Prof. Taylor Lewis, of Schenectady, N. Y., on "The Best Modes of Studying the Greek and Latin Languages;" by Prof. John Proudfit,

of New Brunswick, N. J., on "The Study of Portions of the Greek and Latin Fathers in Schools and Colleges;" by Prof. H. J. Anderson, of New York City, on "Physical Science in Reference to the Support of its Higher Schools;" by Prof. F. A. P. Barnard, of Oxford, Miss., on "Improvements Practicable in American Colleges;" and by J. G. Hodgins, of Toronto, on the "System of Public Education in Upper Canada."

In the discussion of the topics of these lectures and papers a large number of members from different parts of the country participated. The meeting was one of the largest in point of attendance, and the character of the papers and discussions one of the most interesting and profitable which has been held in the country.

The sixth annual meeting will be held in Detroit, commencing on the second Tuesday of August, 1856. B.

WESTERN COLLEGE SOCIETY.

The Society for the Promotion of Collegiate and Theological Education at the West held its twelfth anniversary in Providence, R. I., October 31st.

The annual discourse was delivered by the Rev. R. S. Storrs, Jr., D.D., of Brooklyn, N. Y., on the preceding evening, to a crowded audience in the High Street Church. A copy of this admirable discourse was requested for publication, but it is the wish of the Society to secure its repetition in several places before it is issued from the press.

At the anniversary exercises in the Central Church, the Rev. Prof. Goodrich, of Yale College, presided, and the meeting was opened with prayer by the Rev. E. V. Gerhart, President of Franklin Marshall College, Lancaster, Pa. An abstract of the annual report was read by the Corresponding Secretary, Rev. T. Baldwin, and interesting addresses were delivered by Rev. R. W. Clark, D.D., of Boston, and Rev. Dr. A. D. Smith, of New York.

The main points considered in the report are the difficulty of so constructing the great argument of the Society that it could be fully apprehended by the popular mind, and the still greater difficulty of securing its adequate diffusion; the case of Western Reserve College; the publication of Tyler's Essay on Prayer for Colleges, as marking a new era in the history of the Society; revivals of religion in the institutions aided; the death of the Rev. J. M. Ellis; the necessity of accurate information in regard to the West, and the best means of securing it; the importance of a full development of Western resources, and a prevention of the needless multiplication of colleges, in order that no unnecessary burdens may be imposed upon the Eastern churches. The growing feeling at the East, that the West ought to sustain its own institutions, was alluded to, and erroneous views in respect to the *available* resources of the Western country guarded against.

The progress of the Society was shown to be real and highly encouraging, but yet sadly slow when compared with the rapid and wondrous development of the West. Ten colleges have been aided during the year, viz., Marietta, Wittenberg, and Heidelberg Colleges, Ohio; Wabash College, Indiana; Illinois and Knox Colleges, Illinois; Beloit College, Wisconsin; Iowa College, Iowa; German Evangelical Missouri College, Missouri; and Pacific University, Oregon. Knox College would no longer apply for aid, making the third institution which had come off from the Society's list as not needing further assistance. Another, Wittenberg, would follow at the close of the next year, and two or three others were making rapid advances toward a state of independence in respect to for-

eign aid. The importance of doing up the whole work of the Society *east of the Mississippi* was especially set forth.

The College of California was received upon the list of the Society, making ten Institutions in all, which will receive aid during the next year. Applications were also received from three new Institutions, viz., Webster College, Missouri; Yellow Spring College, Iowa; and the College of St. Paul, Minnesota. These applications were referred to a special and able Committee, composed of individuals representing the two denominations which co-operate in the Society who are to send a part of their number West, to make personal examination of all these cases. The Committee are also expected, in their report to the Board, to give special consideration to the true principles of co-operation in the work of establishing colleges at the West.

It appeared from the Treasurer's Report that the balance in the treasury at the close of the previous year (including $1,672 subject to outstanding drafts) was $2,501 34—the total receipts, $19,391 14; and the entire resources of the year, $21,892 48. More money had passed through the treasury for the benefit of colleges than in any previous year; but present resources were entirely inadequate to meet the growing demands.

The Rev. Dr. Brainerd, of Philadelphia, was appointed to deliver the next annual discourse before the Society, and the Rev. Dr. Kirk, of Boston, his alternate. The Society adjourned to meet on the last Tuesday in October, 1856, at the First Congregational Church in Bridgeport, Conn.

The Board of Directors were in session at Providence the two days preceding the anniversary of the Society. At these sessions the reports of the Secretary and Treasurer were carefully considered, and other important business was transacted.

Each Institution upon the list of the Society is required annually to furnish the Board with a financial statement, showing its resources, income, expenses, and wants, together with such other facts and considerations as may go to sustain its appeal for aid, and enable the Directors to reach an intelligent decision in respect to its claims upon the treasury. These applications were read and carefully considered, and then appropriations made for the year according to their supposed relative demands.

When new institutions apply for aid, they are required to furnish the appropriate documents in relation to their terms of incorporation, their officers, trustees, and students, descriptions of their locations, their relations to similar enterprises in the same region of country, their resources, present or prospective, etc., etc., that the Board may know their true condition, and so appreciate their claims to the assistance desired. These several points are then thoroughly considered by the Directors, and if doubt remains, special committees are sent to the West to make personal examination.

BOOK-NOTICES DEFERRED.

Our acknowledgment of books received which we had prepared for this number of the Journal, is deferred for the want of room. It will not be forgotten in our next.

Engraved by J.C.Buttre from a Daguerreotype

George Peabody

OF LONDON, BANKER.